EMPLOYEE RETIREMENT PLANS: INCREASING PARTICIPATION AND CONTRIBUTION LEVELS IN VOLUNTARY RETIREMENT PLANS VIA MESSAGE FRAMING AND SELF-EFFICACY

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by

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The undersigned, appointed by the dean of the Graduate School, have examined the thesis entitled

EMPLOYEE RETIREMENT PLANS: INCREASING PARTICIPATION AND CONTRIBUTION LEVELS IN VOLUNTARY RETIREMENT PLANS VIA MESSAGE FRAMING AND SELF-EFFICACY

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DEDICATION

When I began this master's degree pursuit, I was a newly-single mother of a 6-year-old. I worked a full-time-plus career while juggling a rigorous academic schedule and an overcompensated effort to ensure my son's healthy adjustment. I had no idea how difficult it would be, but I remember crying tears of joy and feeling overwhelmingly humbled when I was accepted into the Missouri School of Journalism. I told my son it was a "big deal" and a "moment to be really proud." He understood those words. He was excited. He made me promise we'd celebrate with chocolate cake. We had no idea that cake and celebration would ultimately take four years and a whole lot of sacrifice along the way.

We've eaten far too many fast food dinners, done numerous amounts of homework together, and he could nearly qualify as a master in Prospect Theory. I've heard that little voice ask "Mom, are you done working yet?" more times that I can count. I've also seen that little face grin so big you'd think he was promised Disneyland, by hearing Mom made an A in one of her courses. And, best of all, that little boy, now 10, understands that he will never be too old to set and achieve new goals.

So, to you my much-loved son, Carter, I hope you know that you can achieve anything you can dream, and your Mother will be supporting you every step of the way. Your sacrifice, love, and support have meant the world to me.

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And lastly, I thank the University of Missouri System’s Total Rewards department and Retirement group, who without the access to information and employee population, this research would not have been possible. May this work further their mission and be valuable to their work.

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EMPLOYEE RETIREMENT PLANS: INCREASING PARTICIPATION AND CONTRIBUTION LEVELS IN VOLUNTARY RETIREMENT PLANS VIA MESSAGE FRAMING AND SELF-EFFICACY

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ABSTRACT

Many Americans are ill-prepared for retirement. Either they are not saving or do not have access to retirement plans and/or retirement plan education. National trends suggest companies are moving away from employer-sponsored retirement plans and toward employees managing their own accounts. The concern with this shift is that many employees lack financial savvy to make educated investment decisions; and, when the time comes for retirement, workers will not be financially prepared, resulting in a need to continue working. This continuation may be in conflict with their personal needs and desires, as well as the employer's workplace needs. However, employers are in a unique position to influence, and potentially reverse the negative outcome of this trend. Many employers offer internal communications and have the ability to control the message framing of those communications. This study analyzes how gain and loss frame messages impact retirement savings behavior intention for employees at the University of Missouri. It also evaluates the influence of self-efficacy as a mediating variable for that behavior intention.

KEYWORDS: retirement, savings, prospect theory, message framing

Introduction

There was a time when setting aside a portion of a paycheck for a rainy day or retirement was commonplace (Wooten, 2004). Today, many Americans feel it is simply out of reach. The economic recession of the past decade has rendered many families unable to pay bills or able to save money for future endeavors. For many there is a paycheck-to-paycheck existence.

In 2007, a retirement confidence survey reported about 66 percent of employees and/or their spouses had savings and about 60 percent were currently putting away money (Helman, VanDerhei, & Copeland, 2007). Of those who were saving, about half reported their investment assets at about $25,000 outside their employer-sponsored defined benefit plan and their home (Wiener & Doescher, 2008).

The employer-offered retirement plans included defined benefit and defined contribution options. The defined benefit plan is an employer-sponsored plan, also called a pension, in which the employer assumes the financial risks based on the stock market performance. These plans promise the employee a set amount of money upon their retirement, regardless the market performance (Annuity Digest, 2013).

In opposition, the defined contribution is a 401(k)-type of plan in which the employee assumes the risk of the stock market performance. The employee has some say in choosing investments and can withdraw funds at their discretion upon retirement (Annuity Digest, 2013).

Given this evidence, employers in the private and public sectors have ramped up their efforts to educate and motivate employees to save funds for retirement years. These efforts have taken two forms: policy change and communication. This research tackles communication by addressing the question: How can message framing and self-efficacy in communications influence employee participation in voluntary retirement plans?

While this research explores message framing impacts on retirement contribution, the results can also be applied to other types of internal communications: human resources, employee benefits, employee compensation, employee health and wellness, etc. This study focuses on the University of Missouri and its employees.

As costs surrounding employee benefits such as health care and retirement have increased, many organizations have shifted the financial responsibility of those expenses to the employees. In order to be prepared for retirement, employees need to take ownership of their savings, begin investing early, and do so regularly. Employees often receive messages from their companies encouraging certain behaviors—in this case, it is common these messages suggest the employee set aside their own money for their future. In addition, they receive similar messaging through from the third party retirement plan administrator.

As one might imagine, these benefits communications are comprehended differently depending upon its sender and the way it is framed. Employers can sometimes be viewed as “big brother” and their intentions met with significant skepticism (Baxi &

Nickel, 1994-1995). Therefore, it is important for employers to understand ways to alleviate that skepticism in order to help their workers.

This study examines variables including message frame and self-efficacy. The message frame evaluates gain- and loss-frame messages based on Prospect Theory. This theory explains that decisions are influenced by the way in which something is presented (Tversky & Kahneman, 1981). An audience, a sender, a medium, language, photos, concepts, and context all impact the message frame. These elements can evoke emotions and potentially skepticism, in turn, impact the decision being made.

As audiences are influenced by the frame, is the basis to evaluate whether segments of an audience make different decisions. Prospect Theory says the audience will generally choose a certain gain over a probable gain and a probable loss over a certain loss (Tversky & Kahneman, 1981). The university has a very large and diverse employee audience; therefore it is important to understand how framing impacts decisions based on socio-demographics. Studies show that age, gender, income level, marital status, and employment status impact financial decision making and risk preference (Bateman, Lai & Stevens, 2012; Chaulk, Johnson & Bulcroft, 2003). Understanding these variables will enable the university to tailor its messaging for its desired outcome.

This study will also evaluate self-efficacy as a mediating variable in regard to retirement savings. Self-efficacy is the belief in being able to do tasks or achieve goals by oneself (Bandura, 1986). Self-efficacy is influenced by framing and influences risk-based choices. Therefore, understanding its ability to mediate savings behavior will be beneficial to an employee, as another communications tool.

Retirement saving, too, despite personal or organizational obstacles, can be influenced by the way in which a message is framed. Retirement messages generally center on the employees' core retirement plan and the voluntary retirement plans. This study focuses on the voluntary retirement plans as these plans are employee funded by the individual's discretionary income and can be influenced by target messaging.

Voluntary retirement plans are what most people think of as supplemental retirement plans. These tend to be the 401(a), 403(b), 457(b), etc. These plans are one piece of the complete retirement package. Financial advisers say to live solely on retirement income most people need a package that includes three pieces: a pension (defined benefit), Social Security, and any one of the above-mentioned voluntary plans (defined contribution). In a 2012 nationwide online survey of more than 3,600 workers, 69 percent reported they could work until they were 65 years old (normal retirement age) and still not be financially prepared to retire (Transamerica Center for Retirement Studies, 2012). Many people think their pension and Social Security will be adequate to provide the standard of living that will allow them to travel and pursue other goals after they stop working (Transamerica Center for Retirement Studies, 2012). Given inflation and longer borrowing terms on mortgages, which is usually the largest debt owed by an individual, the belief that Social Security and a pension will be enough is increasingly becoming unrealistic.

While it is not possible to determine precisely how much money people will need to support themselves during their retirement years, there are online calculators that can be used to estimate people save enough for retirement. On the American Association of Retired Persons website (AARP.org), its calculator is free to use and allows users to complete a brief questionnaire with queries about marital status, age, salary, savings, and anticipated lifestyle upon retirement. These types of estimates allow a user to evaluate if their consumption level will balance their retirement income, or if not, how much more they should be saving to maintain a similar or desired lifestyle upon leaving the workforce (Schulz, 1992).

In 2006, the U.S. government passed the Pension Protection Act, which allows companies to automatically enroll participants into its programs. However, even with this legislation, about 42 percent of workers report they work for an employer that does not offer a retirement plan option (Copeland, 2006).

As employers across the country have replaced traditional pension plans with defined contribution plans, the automatic enrollment for contribution levels have helped employees save. These plans are those in which the employee themselves contributes funds and in some instances the employer does as well. In the defined contribution plans, the risk of market value is assumed employee. At the time of retirement, the employee's monthly payment will depend solely on the amount of money the employee chose to contribute to the account through the years and how well the stock market performed. This is in contrast to the defined benefit plans, which have become unsustainable for many employers to maintain because they require the employer to pay out a set amount of money when people retire from the organization regardless of the performance of the stock market. The risk of performance is assumed by the employer.

One of the problems employers are facing in this transition is how to help their workers understand the importance of saving for retirement. A workforce that is ill-prepared for retirement can create potential economic issues in future years. Employees will need to work longer to provide for their basic needs and this could create a glut in the labor market, with fewer job openings for entrants into the job market. Therefore, employers are using communication as an educational and persuasion tool to help their workers understand the importance of preparation.

Background

In 2014, the University of Missouri employees were provided defined benefit and defined contribution retirement plans. Of its 29,544 employees, approximately 19,000 were benefit-eligible, meaning they worked at least 30 hours per week (University of Missouri System, 2013). This group was eligible to participate in the core retirement offerings, also known as the defined benefit. All 19,000 qualified for the defined benefit plan and became vested after five years of continuous employment (see Figure 1). The defined contribution plans, also called voluntary retirement plans and the focus of this paper, had a total of 5,732 unique participants who had a balance in their account(s) whether they were currently contributing or not. Among those 5,732 unique participants, there were 8,907 investment accounts with plan administrators TIAA-CREF and Fidelity (see Figure 1).

The university offered all employees three defined contribution plans in which to participate: 401(a), 403(b), and the 457(b) (see Figure 2). The most popular choice among employees was the 403(b), which is the nonprofit version of the 401(k).

In the past, the retirement communications have taken a passive approach by providing information about plan changes or enrollment eligibility. In 2010, under new leadership, the benefits department was restructured to combine employee benefits, compensation, retirement, and wellness under one umbrella. A communications staff was amassed, and it began to take a deeper look into its communication strategies surrounding each of these four areas. Its primary message was to help employees understand how all four areas contribute to their total package of rewards as a university worker.

The communication staff contracted with AonHewitt, a consulting firm with experience in human relations and benefits strategies, to provide an attitudinal segmentation study of its population. The segmentation study took into consideration employees from all four of the university campuses and healthcare system. The evaluation considered the blend of rural and urban locations and the roster of public university employees from the collective population to develop an overall view of MindBase® segmentation, (see Table 1). This assessment provides insights into the target population and how they best respond to communications.

This MindBase® segmentation information has been successful for companies such as Sam's Club and Crystal Cruises. Sam's Club used this audience information in advertisements to yield an extra $800,000 in profit and Crystal Cruises was able to engage its buyers to purchase high-end cruises which brought in millions of dollars to the company (The Futures Company, 2013). These are relevant examples because they show by using MindBase® segmentation, companies and employers can create behavior change and motivate their target audiences to make specific purchases or decisions.

The segmentation results provide employers an understanding of their target audience, in this case, the university employees. AonHewitt had the employee information compared to The Futures Company's national database of 260 million adults. The comparison categorized university employees based on their behaviors, lifestyles, attitudes and consumer habits.

The university's four most popular audience segments were At Capacity, Measure Twice, Rock Steady, and Sophisticated (see Table 1). This information served as a basis for message medium and content. For example, the most popular category is Sophisticated. These employees worry about getting older and state they need to do more financial preparation to be ready for retirement. Knowing this information, the communications staff create pertinent content to engage employees. In addition, this MindBase® segmentation data show that most employees prefer direct mail or email, which provides a medium for the communications staff to use that will likely be well-received. This study attempts to determine which message frames directly and indirectly influence employees to invest in their retirement plans.

Another way to increase employee motivation, and self-efficacy, is through education. Several studies have found when employers provide educational materials to employees, there is an increase in employer-sponsored retirement plan participation (Conte 1998; Yakoboski, Ostuw, and Hicks 1998). Parts of the educational messaging are to encourage non-savers to start with nominal contributions and increase those amounts over time (Wiener & Doescher, 2008). This build up helps the employee feel capable of contributing and allows them to set the amount for which they feel comfortable. The university provides retirement education through electronic and print mediums at the workplace and mailed to employees' homes, as well as provides opportunities for free online and in-person seminars and free financial counseling at the workplace or by phone.

Literature Review

This literature review explores three themes: retirement, theories, and variables. During the past 25 years American employers have shifted from offering a defined benefit retirement plan for employees to a defined contribution plan. This shift has moved the complexity of understanding finances and investments from hired experts to employees with varying levels of financial knowledge. These employees are now responsible for contributing to and controlling their financial futures. It is important for these workers to save money during their younger years when they have the least amount of disposable income because those investments grow over time. It is the longevity that allows the investments to endure the stock markets' ups and downs, and potentially grow to an amount that may allow the worker to retire with a similar lifestyle of the one experienced during employee's working years.

Retirement

Retirement history.

Since the 20th century employers have been providing benefits to employees in addition to wages. These perks were primarily offered to high-wage workers until the 1930s. It was during the era of Franklin D. Roosevelt's New Deal that these benefits spread to most employees across the country. The government began offering private companies tax subsidies as a safety net and bargaining tool with unions (Dulebohn, Molloy, Pichler, & Murray, 2009). The New Deal also brought forth the Social Security program, which took money from taxes to ensure older persons would have a monthly pension payment (National Archives and Records Administration, 2014).

Benefits are programs offered by employers for a variety of reasons. The federal government requires employers to contribute to Workers' Compensation, Medicare, and Social Security per worker. However, other benefits are not required to be offered to workers. These fringe benefits include health insurance, vacation and sick leave, flexible schedules, pension plans, voluntary retirement plans, etc., and are typically offered to recruit and retain employees. When employees have a favorable attitude toward their benefit package, they tend to be more productive, more loyal, and more satisfied (Dulebohn, Molloy, Pichler, & Murray, 2009). Such productivity, loyalty, and satisfaction can improve the company's financial bottom line and overall performance by ensuring its competitiveness and lower turnover. Despite these attributes, offering these benefits can carry financial liability risks for the employer. Benefits, which include retirement plans, typically make up about one-third of labor costs for a company (Dulebohn, Molloy, Pichler, & Murray, 2009). Therefore by shifting the risk of retirement investments to the employee, the employer can limit its liability and retain the integrity of its bottom line.

Retirement components.

Retirement income is traditionally made up of three components: Social Security, personal investments, and an employer-sponsored retirement plan. Social Security is a government program that all workers pay into via payroll taxes. When workers reach age 65, they become eligible for full Social Security retirement benefits (Social Security

Administration, 2014). Personal investments can be any funds set aside for use after retirement, which can include bank savings, stocks, bonds, mutual funds, etc. The employer-sponsored plan can be a defined benefit (pension), defined contribution (tax-sheltered annuities), or a combination of the two.

Despite the advantages a company experiences by offering benefit packages, the packages can create a financial burden on the employer, especially if there is unfunded liabilities. The employer carries the responsibility of pension payments despite the performance of the investment market and carries the expense of healthcare costs as they outpace inflation (Dulebohn, Molloy, Pichler, & Murray, 2009). The cost trend and unfunded liability can have an adverse effect on the company, therefore the United States is experiencing a transformation of how healthcare benefits are being designed and offered, and companies are beginning to shift the financial risk of retirement to the employees to manage.

National Trends

Retirement plans.

Core retirement plans: Defined benefit.

Companies are forced to develop alternative solutions to defined benefit plans because of their expense and because of the large Baby Boomer generation preparing to retire. Baby Boomers are those people who were born between 1946 and 1964. Many companies have provided the defined benefit, or pension plan, in the past. These are formula-based payments that consider years of service, salary, and age (Dulebohn, Molloy, Pichler, & Murray, 2009).

Employees who are part of the Baby Boomer generation tend to be the most receptive to the defined benefit plans. They are content staying with one employer long-term in exchange of job security and financial security in their retirement years. On the other hand, the labor market is shifting to a younger generation that prefers to job hop to advance careers and are more concerned about today's salary than tomorrow's retirement (Dulebohn, Molloy, Pichler, & Murray, 2009). This generational difference has allowed companies to question their obligation of financial provisions after employees have retired.

Core retirement plans: Defined contribution.

This questioning has led employers to shift the financial risk and retirement-investment decision making to the employee. By offering a defined contribution plan, employers have removed their financial burden of promising payouts for future decades. Some employers have opted to give workers a base amount of money in an employer-sponsored defined contribution plan, while other employers will contribute matching funds to those the employees who put their own money into the account. And yet, there are employers have opted to forgo any company contribution and simply make the retirement plans available for employees themselves to contribute to and manage. The problem with shifting the management of investment plans to employees, is they are often not financial planners and lack knowledge of how to invest their money appropriately (Dulebohn, Molloy, Pichler, & Murray, 2009).

Core retirement plans: Hybrid plans.

Other employers, such as the university in this study, have chosen to offer a hybrid plan. This is a combination of the defined benefit and defined contribution plan. In these plans, there is generally a fixed formula to determine the pension payment, which is earned after a vesting period. This formula can consist of years of service, salary, and a multiplier. The defined contribution portion allows the employee to put in a percentage of their salary and the employer may match that contribution.

At the university in this study, the hybrid plan included a defined benefit that uses a fixed formula to calculate the payment amount. The other portion included a defined contribution in which the university contributed a 2 percent base, and if the employee made a personal contribution then the university matched the employee’s contribution up to 3 percent of the employee’s salary, making it possible that the university would contribute a total of 5 percent of the employee’s salary to the defined contribution portion of the retirement account. New employees were automatically enrolled at a deferral rate of 3 percent to enable the employee to receive the highest matching amount (University of Missouri System, 2014). The employee could decrease or increase their contribution amount.

Voluntary retirement plans.

The university offered employees an option to participate in its voluntary retirement plans, in addition to the employees’ core retirement plan. These voluntary plans were administered through Fidelity and TIAA-CREF. The voluntary retirement plans offered included the 401(a), 403(b) and 457(b). Employees could participate in one or more of those plans, by investing their own funds into the account(s). They could invest pre- or post-tax in the 403(b) and 457(b). Investing pre-tax saves money now, but requires taxes to be paid when the funds are withdrawn. Investing post-tax allows the employee to pay the taxes now and withdraw the money later without paying additional taxes. In the 403(b) and 457(b) plans, any employee, regardless of their benefit-eligibility, could participate (University of Missouri System, 2012). The 401(a) plan had different regulations and only allowed benefit-eligible employees to participate. They were required also wait 90 days into their new job before they could contribute any funds. Employees could contribute to any of the three voluntary plans on their first day of employment, and were subject to contribution limits set by the Internal Revenue Service each year. The university did not match any employee contributions to any of these three plans (see Figure 2).

The university provided employees with free financial counseling with financial experts from both of these companies. Employees could choose to participate by telephone or in person at a location on one of the university's multiple campuses. In the overall retirement savings picture, the voluntary retirement plans are considered to be the personal savings portion.

Challenges

The concept of retirement can be complex and daunting to many people. In fact, 86 percent of workers surveyed by the Employee Benefit Research Institute (Ackley, 1998) said they knew they would need between 60 to 80 percent of their current salary during their retirement years. However, only 27 percent of those people actually know what amount is needed. While they know they need to save money, 95 percent of those surveyed saying the savings should begin early, but 31 percent are not regularly putting money aside (Ackley, 1998). Economists are conducting research to evaluate whether this lack of action is related to a deficit in financial literacy (Lusardi & Mitchell, 2007). Financial literacy is addressed by employers providing financial education opportunities, such as free sessions with financial advisers.

Financial education is defined by The Organization for Economic Cooperation and Development as:

> "The process by which financial consumers/investors improve their understanding of financial products and concepts, and, through information, instruction, and/or objective advice, develop the skills and confidence to become more aware of financial risks and opportunities to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being." (Lusardi and Mitchell, 2007, p. 36)

Employers have responded to the financial literacy issue by offering educational sessions, and some employers such as the one in this study, have brought financial advisors on to the campus to provide free sessions.

Theories

Self-Efficacy Theory.

Self-efficacy influences the way people feel, think and develop intrinsic motivation. People who display a strong sense of self-efficacy and confidence tend to set challenging goals. They are committed to achieving these goals despite obstacles. They tend to overcome the difficulties and achieve these goals. When they fail to achieve these goals, they are able to recover quickly. People who do not have a strong sense of self-efficacy are not as likely to set goals. They feel insecure or incompetent, often using those feelings as excuses for not attempting something they perceive as risky, or challenging (Bandura, 1977).

Self-Efficacy sources.

People develop self-efficacy through four ways: personal successes, social modeling, social persuasion, and psychological responses (Bandura, 1994). These beliefs begin their development during childhood and are grown over a lifetime.

Personal successes.

When people reach a goal, they experience a boost in their self-confidence. Repeated successes reinforce this boost in confidence, creating an increase in self-efficacy. Based on the successes, people are more likely to attempt the same or more challenging goal the next time with less fear of failure. While there are times when people will be unsuccessful in their attempts, their build-up of self-efficacy helps them to develop perseverance to keep trying until they reach the goal (Bandura, 1994).

Social modeling.

When people see someone who is like them—modeling similar financial status, family size, education level—they see the model's successful experiences as possible to achieve. The closer the similarities or the more desirable the model's traits, the more persuasive the modeling will be. This is a common technique used in advertising and marketing. Images and words used in messages can be very powerful to the targeted audience (Evans, 2008). Consider the commercials that show mothers who work, but have clean homes, happy children, and adoring husbands. If the commercial shows that mother feeding her children a certain brand of food for dinner, it is likely the sales of that food will increase based on the target audience of women who work during the day, have a hungry family at home. The message is that by identifying with the model, the belief in oneself being able to do it all and have everyone happy seems doable.

Social persuasion.

Social persuasion is similar to social modeling. While social modeling leads people to believe they can achieve the same successes as the model, social persuasion says people can be persuaded to believe they already have the skills and traits to achieve the goals. As the level of compliments and praise increases, self-efficacy rises as well. Consider the mother in the commercial mentioned under the social modeling section. If the family is complimentary of her chicken dinner, then it is likely she will feel more confident in her cooking skills, and will try to make something more difficult next time to get more positive feedback.

Psychological responses.

Self-beliefs are developed by internal feelings and responses to experiences, or the perception of the difficulty of those experiences (Bandura, 1994). When people have negative emotions like stress, disappointment, and doubt, they are not going to have a strong sense of self-efficacy. If they have a positive attitude, even when they are in doubt, then their level of self-efficacy will increase, as will their likelihood of achieving their goals.

Motivation.

Self-efficacy provides the confidence for developing a goal, and motivation provides the internal means in which to achieve a goal. For example, if people believe they can save 5 percent of their salary in a 403(b), then they are likely to be motivated to seek out account information and adjust their budget to accommodate their goal of investing. Motivation is the reason for taking action; it is the why behind a decision (Bandura, 1993; Merriam-Webster, 2014). In this example, people believe they can save and their desire to make it happen is their impetus. Motivation enables them to initiate an action, persist in accomplishing the task and determines the level of intensity in which the goal is pursued (Mitchell, 1997; Parks & Guay, 2009).

When people believe in their ability to achieve a goal, then they exude a stronger motivation to ensuring its success. They put forth a greater effort and persevere through challenges that may arise. In juxtaposition, people who do not have a high level of self-efficacy are more apt to avoid tasks that they do not feel they have adequate skills to achieve (Van der Bijl & Shortridge-Baggett, 2002).

Self-efficacy and motivation are important in this study, as they can be influenced by message framing. This combination can lead an employee to believe they can save money and initiate the process of doing so through one of the university's voluntary retirement plans. When an employee receives communication about retirement, their reaction may be positive or negative based on their past experiences, competency level, etc. Retirement is a complex topic with difficult language, regulations, and financial principles that are not common knowledge. However, if the messaging can be crafted with easy-to-understand verbiage, similar images to the recipient, and include manageable steps to taking ownership of one's financial wellbeing, then the employee's self-efficacy will increase according to Bandura's (1981) work.

When self-efficacy increases, motivation does as well. Therefore, it is plausible the employee will have a greater motivation to take the desired action of the messaging if framed effectively. This study will evaluate the relationship between the independent variables of message framing with two levels—gain and loss—and dependent variables: contribute one percent and account creation. A mediating variable of self-efficacy will be included in this model to determine whether it influences the relationship between independent and dependent variables. The self-efficacy mediating variable will be tested using measures for goals self-efficacy and plan understanding self-efficacy.

Nan (2007) conducted an experiment of persuasive effects of gain- and loss-frame messaging by testing 150 undergraduates. The students scored both gain- and loss-frame messages on a scale of 1 to 7 as to whether they found them to be useful/useless, good or bad idea, and important or not. The average of the three ratings was considered a measurement of the students' attitude. They then rated three statements from 1 to 7, strongly agreeing to strongly disagreeing. The average of these three ratings was considered to be the index of behavioral intention, which is also known as motivation.

The study found that when the end-state (on the evaluated statements) was adverse, the gain-frame messages had a positive impact on attitude and intention. When the end-state was optimal, there was not a difference between loss- or gain-frame messaging impact on attitude and intention (Nan, 2007).

Messaging that impacts people's perception of their ability to save money, the benefits of saving, future concerns, and the associated costs, has a greater likelihood of moving people to take action (Wiener & Doescher, 2008). Consistent with Nan's (2007) experiment, Wiener and Doescher (2008) found that when messages are framed with a positive end-state, such as showing that saving can be easy, then intention increased because of a belief in self, also known as self-efficacy. When the end-state was adverse and messages used a fear approach, or loss-frame, they had a negative impact on intention to save. The belief in ability declined and that directly impacted their motivation. Therefore, this study proposes self-efficacy will have a positive relationship between frame and account contribution and account creation.

Framing.

When retirement messages are created by the communication staff at the university, the messages are framed with the intention of moving the receiver to share a belief or take an action. A frame uses a sender, a medium, language, concepts, and context to impact or persuade an audience. In order for a frame to work, the receiver has to understand the issue and have formed a belief about the issue contained in the message. Once the receiver is exposed to the message, their subconscious opinion is brought forth, and the frame influences the receiver by reinforcing the previously held opinion, or enables the receiver to rethink that opinion based on the new information (Chong & Druckman, 2007; Eagley & Chaiken, 1993; Wang & Fishbeck, 2004). While there are many types of frames, the most common are gain and loss frames (Tversky & Kahneman, 1981).

Gain-frame messages promote the benefits of taking a certain action, and the positive attributes associated with the action. Loss-frame messages highlight the consequences of not taking the specific action, and emphasize the negative aspects of failing to act (Tversky & Kahneman, 1981).

Loss-frame messaging can use a fear-based approach as in Agnew, Anderson, Gerlach and Szykman (2008)'s experiment when these researchers had participants play a game. The participants were each given $60 and asked to choose between purchasing an annuity or splitting the money and investing in an "equity market and a risk-free asset" (Agnew et. al, 2008, p. 2). They were allowed to play the game six times, and able to earn up to $100 based on their choice and how long they lasted in the game. Before they made their decision, participants watched one of three videos displaying different frames of the annuity and investments—one pro-annuity, one pro-investment, and one neutral. The pro videos displayed negative attributes and losses to the alternative choice. In the end, the researchers found the loss-frame messages using negative verbiage focusing on potential financial loss were influential on the decision-making of participants (Agnew et. al, 2008). The study found that the more risk averse people weres, the more likely they were to choose the annuity after viewing the pro-annuity video which focused on the potential financial loss of stock market investing.

Prospect Theory.

Framing is based on Tversky and Kahneman's Prospect Theory, which describes decision-making based on the probability of risk, and explains framing effects: gain- and loss-framing impact on decisions (Tversky & Kahneman, 1981; Wang & Fishbeck, 2004). Prospect Theory says the audience will generally choose a risk averse option over a risk seeking option.

This theory has two distinct phases: editing and evaluation (Edwards, 1996). When people are faced with a decision, they receive the information and determine all possible choices, regardless of associated risks. This is the editing phase. The next step is the evaluation phase, in which they consider all of the prospects of the value and risk associated with each choice. They then make a decision.

Risks are "associated with hazards that fill one with dread and/or are poorly understood," (Trepel, 2005). In terms of retirement savings, risk can be interpreted as the potential to lose money. If people are risk-averse, they may not be willing to invest their money for a potential gain. They have the security and assurance of having a set amount of money now, but if they invest their money, then there is a possibility of losing some or all of it depending on the stock market activity.

For example, if they invest 10 percent of their income into a voluntary retirement account invested in securities and the stock market plunges, then they are likely to lose a large portion of their savings. On the other hand, if they saved that money in the bank or other venue, then they would be less likely to lose money, or to gain any if the market did well. If they were willing to invest their money, knowing it would be a sacrifice for the short-term but potentially creating a financial boost for the long-term, they would be said to be a risk-taker, preferring a risky potential to sure gain (Trepel, 2005).

Tversky and Kahneman (1981) explored gain- and loss-framing in a study in which they posed problematic situations to students at Stanford University and at the University of British Columbia and asked the students to complete a questionnaire. The first situation suggested a deadly Asian disease epidemic had occurred and would potentially kill 600 people. Students were given two options for a solution: Option A would ensure 200 people would live, and option B offered a 1/3 chance all 600 would live, but there was a 2/3 chance none would live. Students taking this version of the questionnaire chose the certainty, option A to save 200 people.

A different version of this questionnaire was provided to the remainder of students. It stated if option C was chosen, then 400 people would die, and if option D was picked then there was a 1/3 chance no one would die, but a 2/3 chance that all 600 would die. This group's majority chose the certainty of 400 deaths versus the potentially 600 deaths.

Tversky and Kahneman (1981) found that decisions regarding human life were more often risk-averse. The same pattern followed with decisions regarding money. Certain losses are preferred over a potential larger loss. Tversky and Kahneman (1979) found when a lottery is framed as a gain, the audience is prone to risk aversion, and when it is framed as a loss, the audience is apt to be risk seeking. Tversky and Kahneman gave one sample of participants a hypothetical $1,000 and told them they could choose between two lotteries—a sure $500 or a 50 percent change of earning $1,000. The next group was given $2,000 and told they could choose a sure loss of $500 or a 50 percent chance of losing $1,000. In the first sample, the majority chose the certainty of $500 (Kahneman & Tversky, 1979). In the second sample, the majority chose the risk-seeking option. Loss-frame messaging can be very successful in achieving a desired outcome (Agnew et. al, 2008; Tversky and Kahneman, 1981; Trepel et. al, 2005), therefore it can be hypothesized that loss-frame messaging will have a positive relationship on account creation and account contribution.

For employees who already have defined contribution retirement plan, loss-frame messages will have a direct and positive effect on account contribution.

H1: Loss frame has a positive and direct impact on account contribution (contribute one percent).

For employees who do not have a defined contribution retirement plan, loss-frame messages will have a direct and positive effect on account creation.

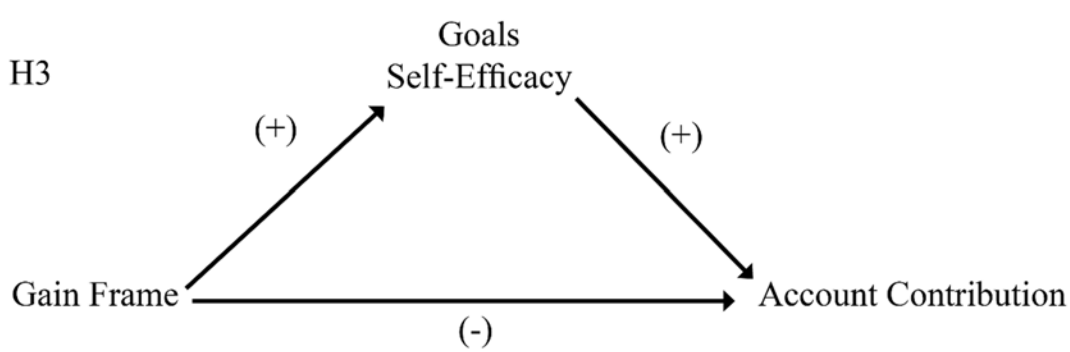
H2: Loss frame has a positive, direct impact on account creation.

The way a message is framed not only has an impact on the decision being made, but on the person receiving the message. The content and tone of the message has an influence on the audience's confidence level in achieving the goal or success in taking a risk. This confidence is interpreted as a belief in self and one's abilities, also known as self-efficacy. Therefore, it is believed for gain-frame to have a positive relationship with account contribution and account creation, it must do so through a mediating variable of self-efficacy.

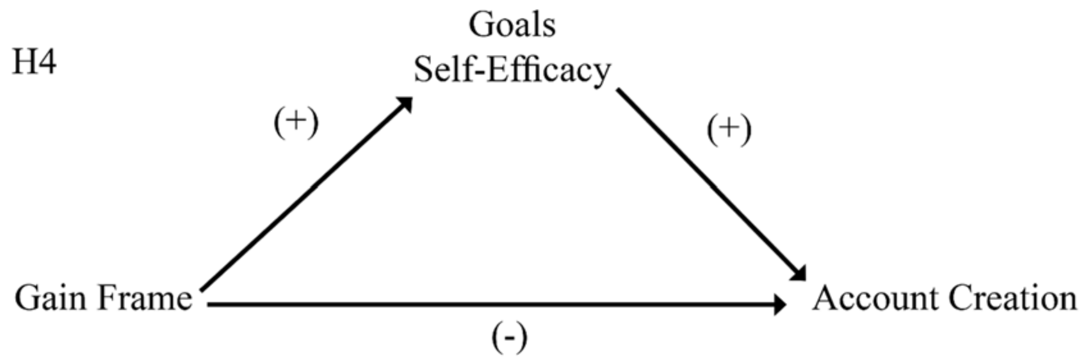
Self-efficacy will be evaluated through two variables: goals and plan understanding. Stajkovic and Luthans (1979, p. 129) reference Albert Bandura's self-efficacy work saying that people will use forethought to self-regulate their behavior. For decisions that have a short-term negative consequence, they will generally devise a plan of action to address or avoid the consequence. For decisions with a long-term consequence, they will set a goal to address it. The greater their level of self-efficacy, the greater the likelihood of setting and achieving their financial goal.

Stajkovic and Luthans (1979, p. 127) further say that the acquisition of knowledge increases self-efficacy. Therefore, it can be presumed that the more people know and understand about a retirement plan available to them, the greater their level of self-efficacy in being able to contribute to one.

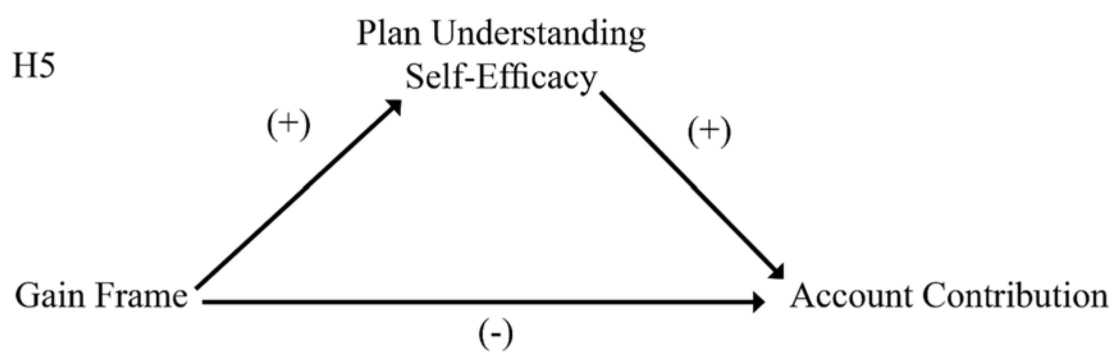
H3: Gain frame has a positive impact on self-efficacy goals as a mediating variable which positively impacts account contribution (contribute one percent).



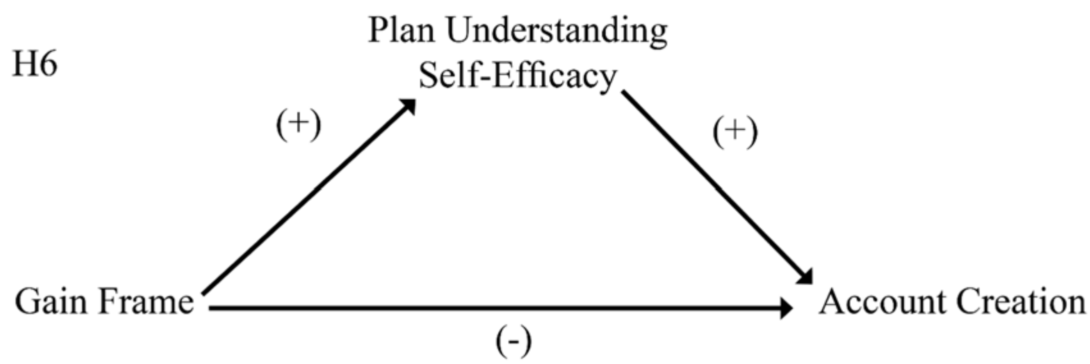
H4: Gain frame has a positive impact on goals self-efficacy as a mediating variable which positively impacts account creation.



H5: Gain frame has a positive impact on plan understanding self-efficacy as a mediating variable which positively impacts account contribution (contribute one percent).



H6: Gain frame has a positive impact on plan understanding self-efficacy as a mediating variable which positively impacts account creation.



Methods

Experiment Design

This study used an experimental design with a straightforward manipulation of a single independent variable. In this case, the independent variable is message framing with two levels: gain-frame and loss-frame. The mediating variables is self-efficacy: self-efficacy goals (the belief in one's ability to set a financial goal) and self-efficacy plan understanding (the belief in one's ability to understand the retirement plan options and their nuances). The outcome, or dependent variable, is whether or not participants indicate they will create a new account if they currently do not have one or increase their contribution to an existing account.

Understanding these relationships between these variables will enable to university, and perhaps other employers, to tailor its messaging to move their employees to open or increase their contributions to a retirement account. Studies show socio-demographics impact financial decision making and risk preference (Bateman, Lai & Stevens, 2012; Chaulk, Johnson & Bulcroft, 2003), therefore demographics are likely to play a role in the decision making of account creation or increased contributions.

Manipulation

The experiment consisted of two questionnaires manipulating the independent variable with two levels of gain and loss frames (see Appendices 3 and 4). Both questionnaires included Likert-type questions with a scale from one to five to measure participants' level of agreement with each statement regarding retirement savings self-efficacy and intentions. Scores were coded so that the stronger an agreement with the statement, the higher the score (Wimmer & Dominick, 2006), and all were coded in the same direction (Appendix 5). There were additional questions that captured their demographics and current participation in retirement plans.

Content within the questionnaires was based on factual data and information with which employees had previously been exposed. This was an ethical consideration of whether to use factual or fictitious content, and it was decided that using facts was a strength so it did not mislead employees as to what retirement plan options and support were available.

Messaging frames were manipulated using specific language to indicate a gain or a loss. Gain-frame messages pitched the desired outcome, in this case saving for retirement, through participatory verbiage (see Appendix 3). For example, users are encouraged to create or contribute to a plan by the offer of support and assistance:

> "Retirement investing isn't something you have to do alone. The retirement staff is available to help you understand your overall plan options. If you need a more detailed plan, there are financial advisors available for free each month on every campus. Appointment times are offered throughout the day, for your convenience. The first step is to visit the retirement website and become familiar with the university plan offerings. The second step is to call the retirement staff with any questions you have. The third step is to schedule an appointment with a financial

> advisor. And the last step is to start saving for your future! You don't have to be a financial whiz to make your money work for you—we are here to help."
>
> (Appendix 3)

Loss-frame messages emphasized the desired outcome through non-participatory language emphasizing the difficulty of saving and the loss of freedom to choose their lifestyle during traditional retirement years (see Appendix 4):

> "Retirement can be a satisfying time in a person's life. Unfortunately, many people do not invest in their financial future. They often feel they do not have money to spare to put into savings. Sometimes they prefer not to think about it until later years, which may be too late. And, sometimes they may choose the instant gratification of spending all of their money now rather than savings to support their retirement years. When a person reaches retirement age and there isn't enough money to support their independence without their job, they are generally forced to continue working. They do not have the freedom to choose what they want to do, as they may have envisioned for their retirement years. Instead of traveling, volunteering, or spending extra time with their family, they will likely continue working until their health no longer allows them to do so."
>
> (Appendix 4)

A questionnaire is an optimal choice for testing the hypotheses of this study, as it can be taken in a realistic setting, at a reasonable cost and can collect a large amount of data with ease (Wimmer & Dominick, 2006). These manipulations enable the university to better understand which frame works best among its various audience segments in order to yield the desired outcome.

Procedure

Within the questionnaire, an informed consent (Appendix 2) was included at the beginning of the questionnaire, and considered signed if the participation checked the required box saying they read and agreed to the terms. It outlined what this study was about, the types of questions asked, the length of time it should take, and that participation in the study was completely voluntary. However, in order to qualify for the incentive drawing, the questionnaire required completion in its entirety, including name and email. In the consent section of the questionnaire, participants were provided contact information for the Institutional Review Board for questions or clarification about their study participation.

Offering the experiment online allowed all employees to participate regardless their location, as this university has multiple campuses and employees in each county of the state, as well as teaching in locations across the country.

Sample

The participant pool came from the University of Missouri employee base. The retirement program provided a master list of employee email addresses, which included 24,034 names and addresses. There was a discrepancy of nearly 5,500 names from the total number of employees in the system and the list provided. The retirement representative explained that sometimes employees are contract, temporary, or have left the university and therefore did not have an email or it was invalid. Student employees were also ineligible for retirement plan participation, yet they could be workers at the university, therefore were likely to account for the majority of the discrepancy.

Once the email list was provided, an online random number generator was used to determine to which group an employee was assigned. Random assignment is used to eliminate alternative explanations for individual differences in relationships across conditions by giving everyone an equal chance of being assigned to a treatment group (Wimmer & Dominick, 2006). It also increases the researcher's confidence that any changes that happened were due to the conditions and not of the group characteristics.

Once names were assigned and the questionnaires were created in Qualtrics, an email invitation was drafted. The university allowed few groups to send a mass email to its employees, therefore permission was obtained to coordinate with the University Relations staff to send the email on the researcher's behalf and from the researcher's email address. The email message explained the study, that it was voluntary, and that a gift card drawing would be held for those who completed the questionnaire and provided their name.

Of those 24,034 eligible for the study, 2,315 participated. There were more self-identified as women (n = 1,546) than men (n = 651); the remaining number identified as other (n = 1) or chose not to answer the question (n = 118). The largest age group came from those ages 30-49 (n = 959) with those 50-64 (n = 853) not far behind. Other age groups included 18-29 (n = 298), 65 and older (n = 99).

The majority of participants were married (n = 1,503), employed full-time (n = 2,050) and had a college degree (bachelor's degree n = 671, master's degree n = 582, doctoral degree n = 321, and professional degree n = 162). Their earnings varied, with most of them earning between $25,000 and $49,999 ($n$ = 926). There were 126 participants who earned less than $25,000, another 581 earning $50,000 to $74,999, an additional 262 earning $75,000 to $99,999, and 305 earning more than $100,000 per year.

Data Collection

As it is impossible to get a 100 percent response rate, Wimmer and Dominick (2006, p. 205) say using Internet click-through questionnaires such as this one usually provides between a 1 and 30 percent response rate. This study had a 9.6 percent (n = 2,315) participation rate.

Incentives were offered to increase the participation rate. All employees who completed the questionnaire and provided their name, were eligible for one of four, $50 gift cards. The amount of the gift cards followed the university rules and regulations as they were lower than the threshold in which employees must pay taxes on the award. In the data collection at the end of the questionnaire, names and emails were required to be entered into the drawing. The names were separated from the other questions to protect the privacy of the employee. This was possible by creating a second questionnaire for the name collection only, but embedding that link into the primary questionnaire as the last question so employees could skip it if they chose not to participate in the drawing but still have their responses captured. Participants were taken to the secondary questionnaire via computer without any visual differences in the aesthetics of the computer screens.

Analysis and Results

The questionnaires were open for a total of 11 days, and 2,595 participants took the questionnaire in Qualtrics, an online research software tool. Some of those participants dropped out or did not consent to the research study, leaving 2,315 questionnaires of usable data. The raw data in Qualtrics was then uploaded to SPSS, a statistical software that provides analyses (Appendix 5).

Questionnaires A and B included multiple questions similarly phrased, measuring the same variables. A principal component analysis using Varimax rotation was run through SPSS to identify the significantly correlated variables (see Table 2).

Table 2

Principal component analysis of mediators and dependent variables

Rotated Component Matrix

Measures	Component 1	2	3	4
Optimistic About Future	.134	.114	**.636**	.380
Expert Help (Q1)	.070	.124	**.835**	-.055
Confident About Future	.137	.145	**.624**	.292
Create Account (Q1)	.107	**.823**	.115	.099
Increase Contribution (Q1)	.256	**.681**	.178	.107
Salary Allows 1% Contribution (Q1)	**.875**	.189	.141	.236
Confident Can Contribute 1% (Q1)	**.861**	.309	.156	.170
Expert Help (Q2)	.137	.151	**.817**	-.069
Create Account (Q2)	.196	**.821**	.116	.060
Increase Contribution (Q2)	.378	**.683**	.164	.122
Salary Allows 1% Contribution (Q2)	**.882**	.208	.153	.229
Confident Can Contribute 1% (Q2)	**.869**	.315	.160	.166
Financially Responsible	.094	.014	.069	**.583**
Know Amount to Save	.126	.091	.084	**.829**
Understand Retirement Plans	.224	.075	.141	**.667**
Supplement	.402	.090	.441	.143
Save Outside the University	.144	.148	.008	**.699**

Note: Extraction Method: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalization[a]
a. Rotation converged in 5 iterations

During the analysis of 17 questions (see Table 2), four factors emerged. These four factors, which comprised four indexes (two for self-efficacy variables and two for the account contribution/creation dependent variables) are shown in the composite indexes in Table 3. The full items are in the Appendix (Appendix 3). The four variables are: contribute one percent and create account (dependent variables); goals self-efficacy and plan understanding self-efficacy (self-efficacy variables).

Cronbach's alpha, which measures internal consistency, is measured on a scale of 0 to 1.0. The closer to 1.0, the more reliable the test result. For this study, components loading with a factor of above .500 showed statistical correlation and were grouped together.

The first component— contribute one percent—was a composite index of the four items shown in component 1, and was comprised of *salary allows 1 percent increase question one*, *confident can contribute 1 percent* question one, *salary allows 1 percent increase* question two, and *confident can contribute 1 percent* question two (Cronbach's $\alpha = .96$).

The second component—create account—was a composite index of the four items shown in component 2, and was comprised of *create account* question one*, increase contribution* question one, *create account* question two, and *increase contribution* question two (Cronbach's $\alpha = .83$).

The third component—goals self-efficacy—was a composite index of the four items shown in component 3, and was comprised of *optimistic about future*, *expert help* question one, *confident about future*, and *expert help* question two (Cronbach's $\alpha = .77$).

The fourth component—plan understanding self-efficacy—was a composite index of the four items shown in component 4, and was comprised of *financially responsible* , *know amount to save*, *understand the retirement plans*, and *save outside the university* (Cronbach's α = .71).

One item—*supplemental retirement*—cross loaded and failed to achieve a .500 correlation with any component. Therefore it was not included in the analyses.

Table 3

Composite index of significantly correlated variables

Variable	Component Loadings
Contribute One Percent (α = .96)	
Salary allows 1% increase (Q1)	.875
Confident Can Contribute 1% (Q1)	.861
Salary allows 1% increase (Q2)	.882
Confident Can Contribute 1% (Q2)	.869
Create Account (α = .83)	
Create Account (Q1)	.823
Increase Contribution (Q1)	.681
Create Account (Q2)	.821
Increase Contribution (Q2)	.683
Goals Self-efficacy (α = .77)	
Optimistic About Future	.636
Expert Help (Q1)	.835
Confident About Future	.624
Expert Help (Q2)	.817
Plan Understanding Self-efficacy (α = .71)	
Financially Responsible	.583
Know Amount to Save	.829
Understand Retirement Plans	.667
Save Outside the University	.699

H1 predicted that loss frame messages would have a positive effect on account contribution (contribute one percent). An independent samples t-test was computed to compare contribute one percent in gain frame and loss frame conditions. The scores for the gain frame (*M* = 15.32, *SD* = 4.44) and loss frame (*M* = 15.19, *SD* = 4.57) conditions; *t*(2207) = -0.689), *p* =.491. Because the p-value was higher than .05, the null hypothesis failed to be rejected and thus there is a significant relationship between message frame and contribute one percent among university employees.

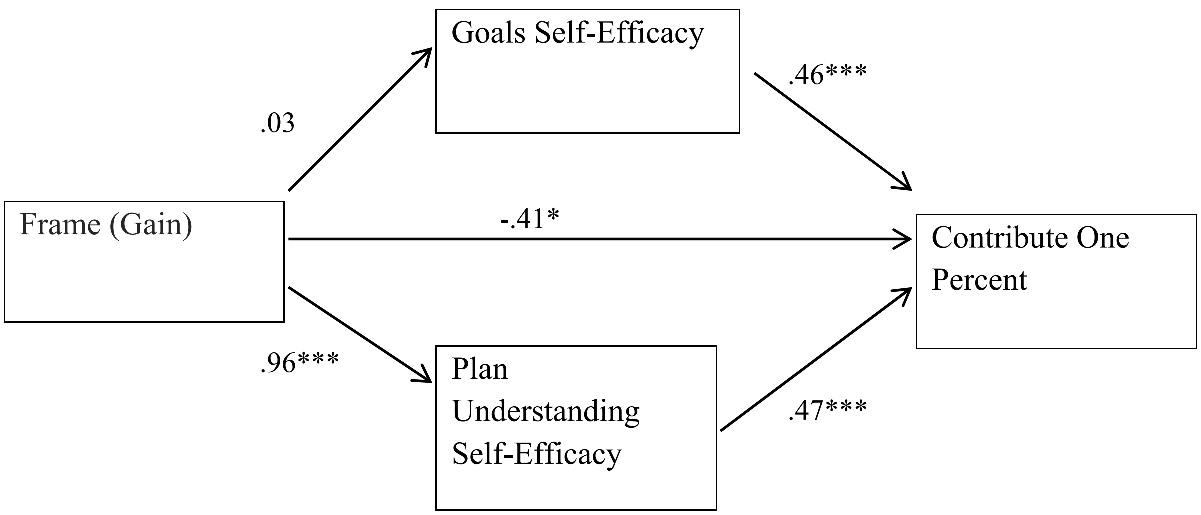
H1 and H2 predicted that loss frame messages would have a positive effect on account creation. An independent samples t-test was computed to compare account creation in gain and loss frames. The scores for the gain frame (*M* = 12.28, *SD* = 3.27) and loss frame (*M* = 12.50, *SD* = 3.29) conditions; *t*(2078) = 1.56, *p* =.119. Because the p-value was higher than .05, the null hypothesis failed to be rejected and thus there is a significant relationship between message frame and account creation among university employees.

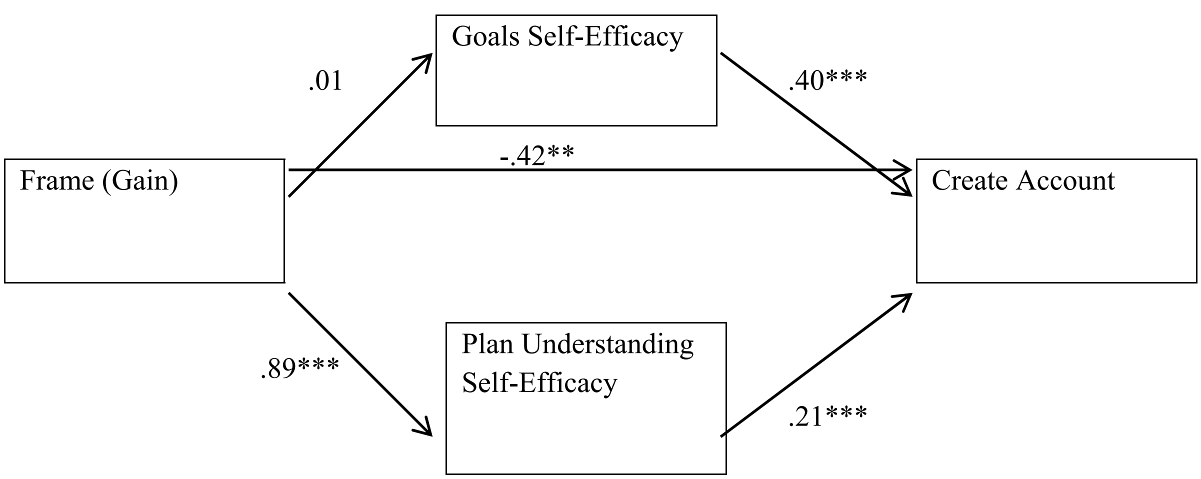
Components three and four, goals and confidence and plan understanding, are representative of self-efficacy and are mediating variables. These theoretical models were tested by conducting path analyses using the PROCESS macro with 5,000 bootstrap samples. This test, which was developed by Andrew F. Hayes (Hayes, 2016), uses a regression analysis to conclude direct and indirect effects in mediator models. This regression was conducted to determine if the relationship between message frame and contribute one percent, and message frame and account creation were mediated by the two self-efficacy variables.

Hs 3 and 5 predicted mediating roles of the two self-efficacy variables (goal self-efficacy and plan understanding self-efficacy) between framing and contributing one percent. Specifically, it was hypothesized that gain frames would lead to positive self-efficacy (for both goal and plan understanding self-efficacy), would then lead to positive account contribution. The first model in Figure 3 shows the results of PROCESS for Hs 3 and 5. Frames did not predict goals self-efficacy, but self-efficacy did predict contribute one percent. So although there was a significant positive relationship between goals self-efficacy and contribute one percent, goals self-efficacy did not mediate the relationship between frame and contributing to one's retirement account. H3 was not supported. Plan understanding self-efficacy, however, did mediate the relationship between frames and contribute one percent, such that gain frames positively predicted plan understanding and plan understanding positively predicted contribute one percent. Further, gain frames had a significant, negative direct effect on contribute one percent. Therefore, H5 was supported. The total effect of the model on contribute one percent was $R^2 = .26$, $p<.001$.

Hs 4 and 6 predicted mediating roles of the two self-efficacy variables (goal self-efficacy and plan understanding self-efficacy) between framing and account creation. Specifically, it was hypothesized that gain frames would lead to positive self-efficacy (for both goal and plan understanding self-efficacy), would then lead to positive account creation. The second model in Figure 3 shows the results of PROCESS for Hs 4 and 6. The results are similar to those for contribute one percent. Frames did not predict goals self-efficacy, but self-efficacy did predict account creation. So although there was a significant positive relationship between goals self-efficacy and account creation, goals self-efficacy did not mediate the relationship between frame and creating one's retirement account. H4 was not supported. Plan understanding self-efficacy, however, did mediate the relationship between frames and account creation, such that gain frames positively predicted plan understanding and plan understanding positively predicted contribute one percent. Further, gain frames had a significant, negative direct effect on account creation. Therefore, H6 was supported. The total effect of the model on contribute one percent was $R^2 = .20$, $p<.001$.

Figure 3. Conditional indirect effects of frame on plan contribution (n = 2135) and account creation (n = 2014).





Note: *p<.05, **p<.01, ***p<.001. Paths are unstandardized regression coefficients calculated in PROCESS (Hayes, 2013), bootstrap samples N = 5000.

(c paths are the direct effect of frame on the DVs. R-square = .26 for contribute one percent. R-square = .20 for create account.

Table 4

Summarization of study hypotheses, tests and findings.

Hypothesis	Test	Finding
H1: Loss frame has a positive and direct impact on account contribution (contribute one percent).	T-test	Supported. Loss frame has a positive and direct effect on account contribution.
H2: Loss frame has a positive, direct impact on account creation.	T-test	Supported. Loss frame has a positive and direct effect on account creation.
H3: Gain frame has a positive impact on self-efficacy goals as a mediating variable which positively impacts account contribution (contribute one percent).	PROCESS MACRO	Not supported. Gain frame did not have a positive effect on self-efficacy goals, but self-efficacy goals has a positive effect on account contribution.
H4: Gain frame has a positive impact on goals self-efficacy as a mediating variable which positively impacts account creation.	PROCESS MACRO	Not supported. Gain frame did not have a positive effect on self-efficacy goals, but self-efficacy goals has a positive effect on account creation.
H5: Gain frame has a positive impact on plan understanding self-efficacy as a mediating variable which positively impacts account contribution (contribute one percent).	PROCESS MACRO	Supported. Gain frame positively predicted self-efficacy plan understanding, which positively predicted account contribution.
H6: Gain frame has a positive impact on plan understanding self-efficacy as a mediating variable which positively impacts account creation.	PROCESS MACRO	Supported. Gain frame positively predicted self-efficacy plan understanding, which positively predicted account creation.

Discussion

In summary, retirement is a complex topic that can be intimidating for the average employee to navigate alone. Due to the retirement plan shift by employers across the country, many employees are faced with this solo navigation to determine their financial future. Some employers are offering assistance via education, while others are doing nothing.

Theoretical Implications

This study is rooted in Prospect Theory, which says that people, in general, are risk averse when it comes to health and financial decisions. But what happens when message framing is introduced? Does the frame then impact the outcome? Prospect Theory suggests it does. It offers that people are exposed to a message which contains a frame that includes a medium, language, concepts, and context, and interprets that message through their own filters—previous beliefs and opinions—before developing their attitude of what the message now means. So, in short, a risk-averse people can be swayed by the frame of the message that they hear. This study goes one step further to question what happens when self-efficacy is introduced into that mix?

This study and its results contribute to Prospect Theory by validating its premise that people choose a certain gain over a probable gain, and a probable loss over a certain loss. When employees had a stronger belief in their ability to understand their retirement plans and to set goals, they were likely to create a new account or contribute to an existing one, alas a certain gain. When employees were told what life may be like during retirement if they did not participate in a retirement plan, they directly chose to open an account or contribute without needing an increase in their belief to do so, thus a probable loss. This is important because many educational institutions throughout the United States are facing similar dilemmas about funding their retirement plans and by being able to control the message, they can influence behavior change and gain participation should they choose to move toward defined contribution plans.

Practical Implications

The employers that are interested in helping their workers understand the importance of retirement and how to put money away, are leveraging communication strategies to get their message across. These messages are most effective when using the framing to influence self-efficacy. When people have a greater belief in their abilities, then they more likely to take action, which is the goal of employers sponsoring voluntary retirement plans.

This study is important because it validates the theoretical linkage between message frame and behavioral indicators. Employers are in a unique position to impact their workforce. They have a captive audience, power of influence and means to provide opportunities to assist in decision making. Therefore, it is important to the communications field, that employers understand the significant opportunities before them and perhaps an obligation to help prepare their workforce for retirement.

While this study included a large number of participants, it could be useful to focus on audience segmentation to further develop what types of messaging work best.

As the makeup of the American workforce has shifted, employers are now evaluating their perceived obligations to provide for workers beyond their working years (Dulebohn, Molloy, Pichler, & Murray, 2009). This shift offers an opportunity for companies to consider how to frame their messages to preserve their image as well as educate their workers on how to manage their retirement investments.

This study, which manipulated the language in a questionnaire given to two groups, found that when a message is framed, it can impact the self-efficacy which in turn has a positive impact on the outcome. In this instance, employees indicated they would either create a retirement account or increase their contribution to an existing one. This study offers validation to these relationships based on reliable and repeatable data and procedures.

Gain-frame messages had a positive and indirect impact on account creation and contribution intention through a mediating variable of self-efficacy (goals and plan understanding). These messages used verbiage that offered the employee support and encouragement. By understanding the retirement plan options, employees gained confidence in their belief that they could either create an account if they did not already have one, or they could contribute to an existing one. The same was true for goals (self-efficacy). Participants in the gain-frame group showed a positive relationship between gain frame and mediating variable, indicating their confidence impacted their belief in being able to set a goal to save for retirement. From these results, employers can learn that if they use positive, gain-frame messaging they will need to accompany the communications with educational sessions to help their workers understand the details of each plan option. They may also choose, like the university in this study, to offer free, individual financial advisers to partner with their employees to discuss financial goals, plan options, and budgeting for savings. By offering the assistance for free, all employees have access as opposed to those with more disposable income. However, one concern is that even though there is education, advising, and seminars available—all of which are gains—younger employees may not participate, thinking they still have many years ahead to save.

The loss-frame messaging revealed a positive and direct impact on account creation and contribution. Participants in this group indicated through loss aversion they were likely to create an account or contribute to an existing one without the need of increased self-efficacy. Therefore it may be beneficial for employers to be open to using loss aversion tactics in their communication strategies. Many employers have been reluctant to take this approach for fear of upsetting their workforce by highlighting the negatives. If communication strategists run a campaign on what life looks like at retirement and show low plan participation statistics, the cost of living including inflation, and the likelihood of working years past the typical retirement age, it could backfire. Although this study suggests it will be effective on moving the population to become account contributors and creators, it could potentially impact morale or be viewed as pressuring employees to participate in the work-sponsored plans.

Limitations

While this study included a large number of participants, it could be viewed as a limitation. The sample population, although randomly assigned to the experimental condition, was comprised primarily of participants in the university-sponsored defined benefit plan, also known as the pension plan. If the same study was conducted with a group of primarily defined contribution plans participants, the outcome may be different considering the employees would be paying into a plan and message framing may not persuade them to add another contribution plan—the voluntary retirement plan. These employees may already see themselves as contributing and not see the benefit of adding a second retirement plan.

Employees who have a defined benefit (pension) plan contribute very little, if any, to the plan. Therefore, they may see retirement as the university offering a plan and they can afford a second plan—the voluntary retirement plan.

Financial decision making is influenced by age, gender, income, marital, and employment status (Bateman, Lai & Stevens, 2012; Chaulk, Johnson & Bulcroft, 2003). Therefore, if the majority of participants had been male, then the results may be different.

The 9.6% participation rate was composed primarily of females, which may be a limitation considering its potential impact on external validity. By having an uneven representation of participants, this could lead to risks of generalizing the results (Sivo, Saunders, et. al., 2006).

Conclusion

This study is the beginning of a dearth of research potential. It would be helpful for employers to understand which segments of their population to understand how to engage employees in their 20s and 30s to contribute in the voluntary retirement plans. In addition, as employees are already contributing to their core retirement plan, it would be beneficial to understand how those contributions impact the contributions to the voluntary retirement plans. Lastly, this study hypothesizes employees 50 years and older are more likely to contribute to the voluntary retirement plans. The construal level theory says the closer the idea of retirement is psychologically, the more likely people are to be engaged in saving. Therefore, according to this theory, it is plausible to think employees in their 20s and 30s may not be as engaged as those in their 50s and 60s. Therefore a future research area would be how to use construal theory in communications to engage those in generations x and y to contribute to retirement accounts.

Another opportunity for future research is to look closer at how the covariates in this study impact decision making. What message types work for each demographic segment—male versus female, 20-29 year olds versus 30-39 year olds, education segments, etc. In addition, what types of language, images, medium, etc. work best for each of these groups, would be a logical extension to this study. By breaking down specific segments and understanding what resonates with each, employers can best use their financial and human resources to yield an optimal outcome. This can be beneficial to not only retirement communications, but health and wellness communications and human resource messaging as well.

Lastly, ethnic background can be further explored as audience segments. By 2050, the U.S. population majority will consist of African Americans, Asians, and Hispanics. An ING study polled, and cited in the article *How Ethnicity Affects Retirement Savings* (Palmer, 2012) found that these groups have different consumer habits and priorities. The study also found that Hispanics and African Americans are more likely to look to their employer for retirement planning help. Therefore, a study evaluating how employers can use message framing to influence behavior change for retirement plan savings would be prudent and impactful both theoretically and practically. Similar to this paper's study, it could be beneficial to use message frame with two levels—gain and loss frames, a mediating variable of ethnicity with multiple levels--African American, Asian, Hispanic, White, etc, and independent variables of account creation and account outcome. By understanding which types of messages resonate with specific groups, employers can better use message segmentation to support their workforce.

The days of fully-funded pensions for workers are gone, and the new normal is for employees to take financial ownership of their future, removing financial obligation from the employer. This study provides valuable information for employers seeking to make changes in their retirement plan offerings. By being able to manipulate the message frame, they can influence behavior change of their population and help their employees help themselves and their futures.

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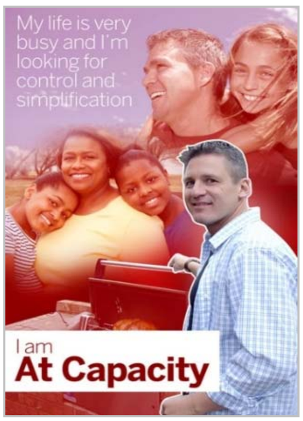
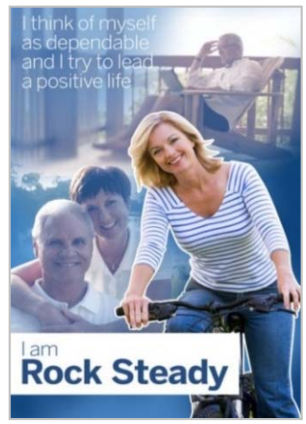
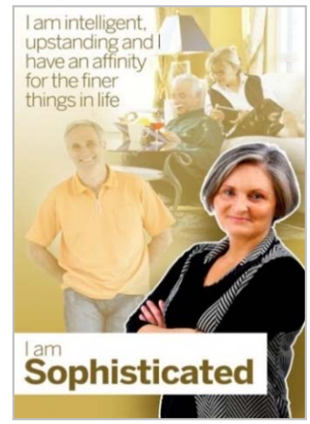
Tables

Table 1 (AonHewitt, 2010)	**MindBase® Segmentation**		
			
"Time is of the essence"	*"An ounce of prevention"*	*"Do the right thing"*	*"Sense and sensibility"*
18%	**14%**	**18%**	**22%**
Who am I?	**Who am I?**	**Who am I?**	**Who am I?**
>I'm often stressed out >My kids are my world >I believe I can change >I'm not prepared for my future	>I'm a consummate planner >I'm financially savvy >I live to enjoy life and the world around me >I care about my health	>At home and with family >I do business with companies that know me >I'm a responsible person >I'm community-oriented	>I like to learn new things >I have high standards >I'm worried about getting old >I care about social issues
How I feel about money	**How I feel about money**	**How I feel about money**	**How I feel about money**
> Pay more than the minimum, but less than the balance due >I'm working on getting rid of my credit card debt >I like buying store gift cards	>I am comfortable financially >Spending my money well makes me feel smart	>I've taken some steps toward reducing our spending >I am concerned about what might happen to my financial situation	>I've been making fewer large purchases these days >I've been more conservative inn how I spend and invest my money

	>I don't miss what I've given up due to the recession	>I am saving some money for retirement, but not as much as I'm supposed to	>I'm trying to cut back on the number of credit cards I use
How I feel about financial relationships	**How I feel about financial relationships**	**How I feel about financial relationships**	**How I feel about financial relationships**
>I share responsibility for our household's financial and investment decisions >I'm saving for retirement, but I know that I should be doing more	>I use my credit wisely >I use a financial advisor, even though I am an experienced investor >My investments performed well compared to the market this year >My investable assets are more than enough to cover me for a rainy day	>In this economy, I feel more exposed to the possibility of losing everything >I look for financial institutions that have a scandal-free past >Sure, I am a little worried about losing money, but I also know that money isn't the most important thing	>I rely on mutual fund managers and prudent financial companies to help me build my wealth >I do have some debt, but I don't overextend myself with excessive credit card debt >I still have some financial planning to do for my retirement years
How to reach me	**How to reach me**	**How to reach me**	**How to reach me**
Internet…quick and convenient	Direct mail; provide phone and mail response channels	Direct mail and online; give me choices	Targeted direct mail; opt-in email

Figures

Figure 1

(University of Missouri System, 2014)

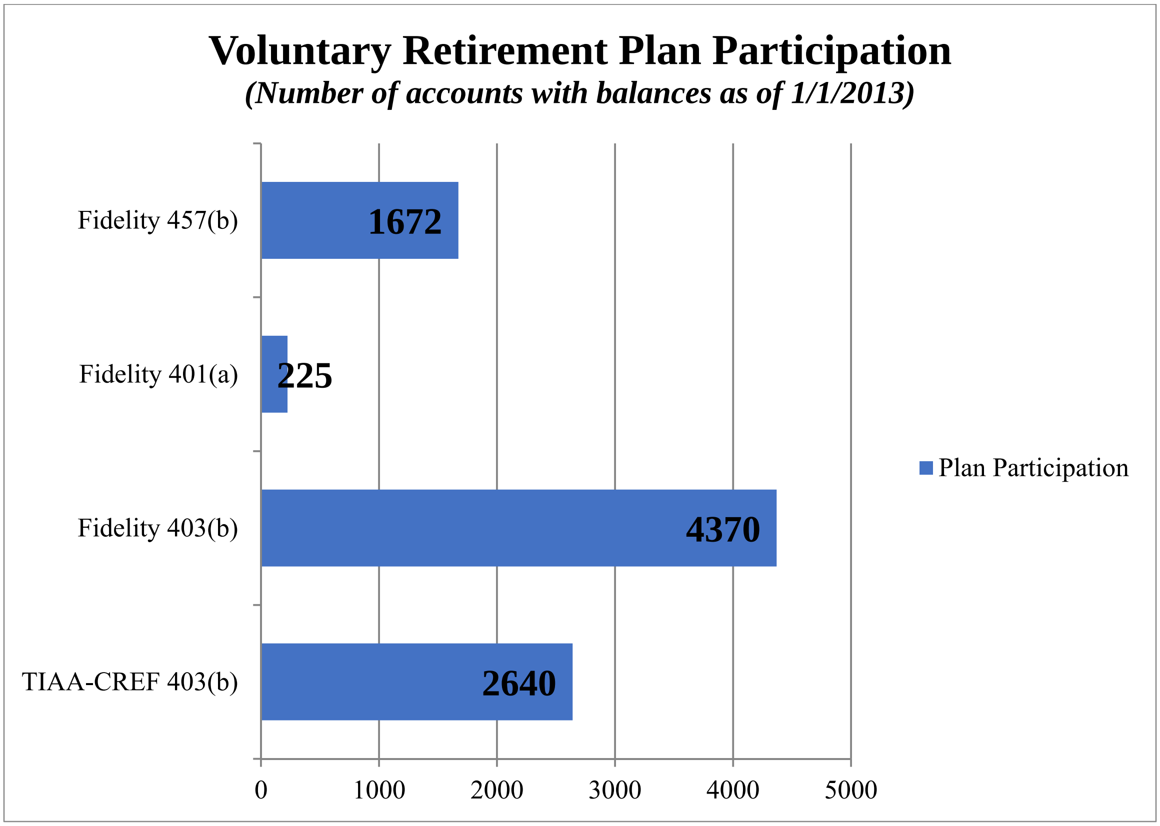


Figure 2

(University of Missouri System, 2014)

retirement

UM Voluntary Retirement Plans (VRP) Highlights

The university provides the following Voluntary Retirement Plan options for both benefit-eligible and non-benefit eligible faculty and staff. You may be able to participate in one or more of these plans.

Plan	Who is Eligible	When Does Eligibility Begin	2013 IRS Annual Limits*	Loan Provision	Withdrawal Provision	Employer Match
403(b) pretax	Benefit-eligible and non-benefit-eligible employees	First day of employment	$17,500 If you are age 50 or older, you may contribute an additional $5,500 annually.	Yes	Allowed at age 59 1/2 or retirement	No
Roth 403(b) after-tax	Benefit-eligible and non-benefit-eligible employees	First day of employment	$17,500 If you are age 50 or older, you may contribute an additional $5,500 annually.	Yes	Allowed at age 59 1/2 or retirement	No
403(b) pretax irrevocable[1]	Benefit-eligible and non-benefit-eligible employees	First day of employment is the enrollment deadine	$51,000	Yes	Allowed at age 59 1/2 or retirement	No
457(b) pretax	Benefit-eligible and non-benefit-eligible employees	First day of employment	$17,500 If you are age 50 or older, you may contribute an additional $5,500 annually.	No	Withdrawal options beginning at age 70 1/2. Should your employment with UM end prior to age 70 1/2, this Plan allows withdrawals without penalty.	Limited. Employees who have ERIP as their core retirement plan can receive matched contributions.
401(a) pretax irrevocable[2]	Benefit-eligible employees	After 90 days of employment, there is a 24 month election period.	$51,000	No	Allowed at age 59 1/2 or retirement	No

*** Your total contribution to 403(b) pretax and Roth 403(b) Plans combined cannot exceed the IRS annual contribution limits. Please visit www.irs.gov and search COLA limits for more information**

[1] On or before the first day of employment, a one-time contribution election that may not be changed unless you end employment with UM. Please contact the Voluntary Retirement Plan department if you are interested in this option.

[2] Individuals who are actively employed by the university in at least a 75% full-time equivalent position with an anticipated employment duration of at least six months and who have completed at least three months of employment in this status are eligible to participate in the 401(a) Plan. Eligibility will begin on the January 1 or July 1, whichever is first, following the three-month employment period. New employees who meet the eligibility requirements can elect to participate at any time during the 24-month period beginning on the first day the employee becomes eligible to participate. Once these enrollment periods have expired, no additional opportunities for enrollment can be permitted.

Appendices

Appendix A

Glossary.

401(a): "A money-purchase retirement savings plan that is set up by an employer. The 401(a) plan allows for contributions by the employee, the employer, or both. Contribution amounts, whether dollar-based or percentage-based, eligibility, and vesting schedule are all determined by the sponsoring employer. Funds are withdrawn from a 401(a) plan through lump-sum payment, rollovers to another qualified plan, or through an annuity (Investopedia, 2013)."

401(k): "A contribution plan where an employee can make contributions from his or her paycheck either before or after-tax, depending on the options offered in the plan. The contributions go into a 401(k) account, with the employee often choosing the investments based on options provided under the plan. In some plans, the employer also makes contributions such as, matching the employee's contributions up to a certain percentage (Internal Revenue Service, 2013)."

403(b): "A retirement plan offered by public schools and certain tax-exempt organizations. An individual's 403(b) annuity can be obtained only under an employer's TSA plan. Generally, these annuities are funded by elective deferrals made under salary reduction agreements and non-elective employer contributions (Internal Revenue Service, 2013)."

457(b): "A non-qualified, deferred compensation plan established by state and local governments and tax-exempt governments and tax-exempt employers. Eligible employees are allowed to make salary deferral contributions to the 457 plan. Earnings grow on a tax-deferred basis and contributions are not taxed until the assets are distributed from the plan (Investopedia, 2013)."

***Defined Benefit:* "**A defined benefit plan (DB) is a pension plan where the plan sponsor such as an employer assumes responsibility for directing and managing all plan assets. In contrast to a defined contribution plan, the plan sponsor assumes market risk under a defined benefit plan (Annuity Digest, 2013)."

***Defined Contribution:* "**A defined contribution plan (DC) is a pension plan such as a 401(k) where the plan participant such as an employee assumes responsibility for directing plan assets among various investment options. In contrast to a defined benefit plan, the participant assumes market risk under a defined contribution plan (Annuity Digest, 2013)."

Employee Retirement Income Security Act of 1974 (ERISA): "A federal law that sets standards of protection for individuals in most voluntarily established, private-sector retirement plans. ERISA requires plans to provide participants with plan information, including important facts about plan features and funding; sets minimum standards for participation, vesting, benefit accrual, and funding; provides fiduciary responsibilities for those who manage and control plan assets; requires plans to establish a claims and appeals process for participants to get benefits from their plans; gives participants the right to sue for benefits and breaches of fiduciary duty; and, if a defined benefit plan is terminated, guarantees payment of certain benefits through a federally chartered corporation, known as the Pension Benefit Guaranty Corporation (PBGC) (Internal Revenue Service, 2013)."

Individual Retirement Account (IRA): "An individual account or annuity set up with a financial institution, such as a bank or a mutual fund company. Under federal law, individuals may set aside personal savings up to a certain amount, and the investments grow, tax deferred. In addition, participants can transfer money from an employer retirement plan to an IRA (see Appendix 1), when leaving an employer. IRAs also can be part of an employer plan (Internal Revenue Service, 2013)."

Pension: "A pension provides regular income payments that you would receive for the rest of your life when you stop working--typically when people retire. A pension plan is a large pool of savings grows over time through contributions from workers or plan participants and their employer or plan sponsor. The plan assets are managed by professional investment managers, and most of the risks (such as investment risk) associated with managing plan assets will be assumed by the plan sponsor rather than plan participants (Annuity Digest, 2013)."

Retirement Planning: "Living at a level of comfort you're used to when you retire requires taking steps to ensure that you have enough money. Retirement planning involves examining your goals for retirement, and then figuring how much you need to meet those objectives. You need to figure-out when to start investing and saving, how much you need to save, and what you may expect to receive from other sources such as Social Security. (Annuity Digest, 2013)."

Appendix B

Consent.

Consent Form to Participate in a Research Study

Researcher's Name(s): Melissa D. Willett (graduate student)

Glenn Leshner (committee chair)

Shelly Rodgers (committee member)

Cyndi Frisby (committee member)

Greg Holliday (committee member)

Project Number: 121194

Project Title: Employee Retirement Plans: Increasing participation and contribution levels in voluntary retirement plans via message framing and self-efficacy

INTRODUCTION

This consent may contain words that you do not understand. Please ask the investigator or the study staff to explain any words or information that you do not clearly understand. You are being asked to participate in a research study. This research is being conducted *to better understand how message framing (the way a message is presented to an audience) and self-efficacy (the belief in one's ability to achieve a goal/task) impact retirement savings decisions.* When you are invited to participate in research, you have the right to be informed about the study procedures so that you can decide whether you want to consent to participation. This form may contain words that you do not know. Please ask the researcher to explain any words or information that you do not understand. You have the right to know what you will be asked to do so that you can decide whether or not to be in the study. Your participation is voluntary. You do not have to be in the study if you do not want to. You may refuse to be in the study and nothing will happen. If you do not want to continue to be in the study, you may stop at any time without penalty or loss of benefits to which you are otherwise entitled.

WHY IS THIS STUDY BEING DONE?

The purpose of this research is to *better understand how message framing (the way a message is presented to an audience) and self-efficacy (the belief in one's ability to achieve a goal/task) impact retirement savings decisions.*

HOW MANY PEOPLE WILL BE IN THE STUDY?

About 30,000 people will be invited to take part in this online study.

WHAT AM I BEING ASKED TO DO?

You will be asked to *answer a series of questions about your retirement savings behaviors and intentions, your belief in your ability to save money, and basic demographics.*

HOW LONG WILL I BE IN THE STUDY?

This study includes an online questionnaire and will take approximately *15 minutes* to complete. You can stop participating at any time without penalty.

WHAT ARE THE BENEFITS OF BEING IN THE STUDY?

Your participation will benefit *you as you become aware of your retirement plan options, can evaluate your current savings status and can set goals for future savings. The employer will benefit as it will better understand how to present communications in ways that employees prefer*.

WHAT ARE THE RISKS OF BEING IN THE STUDY?

It is possible that a participant may experience anxiety by participating in this study due to the nature of financial questions being presented. Should you experience anxiety or other negative emotions, you may stop the study at any time without penalty. If you need professional help, you have free access to the Employee Assistance Program. You may schedule an appointment to visit with a counselor to discuss your feelings and/or your financial needs/goals. EAP has locations at each campus and contact information may be found at www.umsystem.edu/totalrewards/eap.

WHAT ARE THE COSTS OF BEING IN THE STUDY?

There is no cost to you.

CONFIDENTIALITY

By participating in this study, you will be asked to complete a 15-minute questionnaire. Your responses to these questions will be collected to analyze how message presentation and belief in self impact your retirement decisions. You will not be identified by name. If you choose to participate in the prize drawing, you will answer a question that will be separated from your questionnaire so your responses and name will not be connected.

WILL I BE COMPENSATED FOR PARTICIPATING IN THE STUDY?

You will receive no payment for taking part in this study. However, there will be a prize drawing for four, $50 gift cards at the conclusion of this study. You do not need to complete the study to be eligible. To be included in the drawing, you will need to answer a question providing your name. This question will be separated from your questionnaire responses so your answers will not be connected to your name.

Should you be one of the winners of a gift card, you will be contacted after the study to provide an address for where to send the prize. You do not have to participate in the prize drawing to participate in this research study.

WHAT ARE MY RIGHTS AS A PARTICIPANT?

Participation in this study is voluntary. You do not have to participate in this study.

You will also be informed of any new information discovered during the course of this study that might influence your health, welfare, or willingness to be in this study.

WHO DO I CONTACT IF I HAVE QUESTIONS, CONCERNS, OR COMPLAINTS?

Please contact **Melissa Willett (graduate student) at willettmd@umsystem.edu or Glen Leshner, PhD (committee chair) at leshnerg@missouri.edu** if you have questions about the research study. Additionally, you may ask questions, voice concerns or complaints to the research team.

WHOM DO I CALL IF I HAVE QUESTIONS OR PROBLEMS?

If you have any questions regarding your rights as a participant in this research and/or concerns about the study, or if you feel under any pressure to enroll or to continue to participate in this study, you may contact the University of Missouri Campus Institutional Review Board (which is a group of people who review the research studies to protect participants' rights) at (573) 882-9585 or umcresearchcirb@missouri.edu. This Informed Consent form may be printed by the participant or requests for printed copies may be made by emailing Melissa Willett at willettmd@umsystem.edu. It will be included in the questionnaire. By answering the questions included in the questionnaire, you are consenting to have received this information and are voluntarily participating in this study. You understand you may stop your participation at any time without penalty or consequence. You also understand that participating in the prize drawing is voluntary and does not require you complete the questionnaire to be eligible.

CAMPUS IRB APPROVED 7/24/14

Appendix C

Questionnaire (Gain Frame).

Introduction

The University of Missouri offers a variety of retirement plan options to its employees. The university offers a defined benefit to its benefit-eligible employees, those who are full-time employees working at least 30 hours per week with an appointment of at least nine months or more. This defined benefit is considered the core retirement plan. Employees who vested prior to Oct. 1, 2012 receive solely a defined benefit, also known as a pension, (see Appendix 1). Employees who vested after Oct. 1, 2012 receive a defined benefit and defined contribution hybrid core retirement plan, (see Appendix 1).

All employees, regardless of their benefit eligibility, may participate in the voluntary retirement plans. These voluntary retirement plans (401(a), 403(b), and 457(b)) serve as supplemental retirement savings for employees and are the focus of this questionnaire, (see Appendix 1).

This questionnaire should take approximately 15 minutes to complete. Your responses will provide the university a better understanding of how to communicate with employees regarding the voluntary retirement plans. For those employees who complete the questionnaire, and desire to be entered into a prize drawing, you will need to answer question #15. This question asks you to provide your name and how to best contact you. Your contact information will not be shared. It will only be used to distribute the prize. From the completed questionnaires that answer question #14, four names will be selected to receive a $50 giftcard.

Let’s get started!

Self-efficacy

Retirement can be a satisfying time in a person’s life. It is often the period when a person has the freedom to focus on doing things they enjoy--traveling, volunteering or working part-time. After spending a career working hard, retirement can be a fulfilling and much-anticipated reward. People who save in a retirement account earlier their career years, are much more likely to be financially secure after retirement.

1. Indicate below how strongly you agree or disagree with each statement (5=strongly agree and 1=strongly disagree).
    a. Retirement planning makes me optimistic for my future.
    b. Having experts willing to help me plan for retirement makes the process manageable.
    c. If I save money now for my retirement years, I will feel confident in my future financial wellbeing.
    d. If I do not have a voluntary retirement plan account, I am confident I will create one in the next year.
    e. If I have a voluntary plan account, I am confident I will increase my contributions to the account in the next year.
    f. Based on my salary, I am confident I can save at least 1 percent toward retirement.
    g. I feel confident I will contribute more than 1 percent toward my retirement.

Retirement investing isn't something you have to do alone. The retirement staff is available to help you understand your overall plan options. If you need a more detailed plan, there are financial advisors available for free each month on every campus. Appointment times are offered throughout the day, for your convenience. The first step is to visit the retirement website and become familiar with the university plan offerings. The second step is to call the retirement staff with any questions you have. The third step is to schedule an appointment with a financial advisor. And the last step is to start saving for your future! You don't have to be a financial whiz to make your money work for you—we are here to help.

2. Indicate below how strongly you agree or disagree with each statement (5=strongly agree and 1=strongly disagree).
   a. Retirement planning is important to my financial future.
   b. When I set goals, I often achieve them.
   c. I feel confident I can do the four steps listed in the paragraph above.
   d. I feel confident having experts to help me navigate retirement planning.
   e. I feel confident I can save money now for my retirement.
   f. If I do not have a voluntary retirement plan account, I am confident I will create one in the next year.
   g. If I have a voluntary plan account, I am confident I will increase my contributions to the account in the next year.

h. Based on my salary, I am confident I can save at least 1 percent toward retirement.

i. I feel confident I will contribute more than 1 percent toward my retirement.

Plan participation and contribution level

3. Choose the statement that best describes your participation in the voluntary retirement plans (401a, 403b, or 457b).

   __I am currently contributing to a voluntary retirement plan.

   __I am not currently contributing to a voluntary retirement plan.

   __I have in the past contributed to a voluntary retirement plan.

   __I have never contributed to a voluntary retirement plan.

4. If you currently contribute to a voluntary retirement plan, indicate the percentage of your salary in which you contribute to your chosen plan (401a, 403b, or 457b). You may write your deferral percentage in the box below.

5. Choose the statement that best describes your contribution intention level in the voluntary retirement plans (401a, 403b, or 457b) in the next year.

   __I plan to maintain my contribute level.

   __I plan to increase my contribute level.

   __I plan to decrease my contribute level.

6. If you do not currently have a voluntary retirement account through the university, do you plan to create an account within the next year?

☐ Yes ☐ No

7. If you intend to create a voluntary retirement plan account through the university within the next year, indicate the percentage of your salary in which you will contribute to your chosen plan (401a, 403b, or 457b). You may write your deferral percentage in the box below.

8. Indicate below how strongly you agree or disagree with each statement (5=strongly agree and 1=strongly disagree).

   a. I am financially responsible (pay my bills on time, use credit cards sparingly, etc.)
   b. I know how much money I need to save for my retirement years.
   c. I understand the university-sponsored voluntary retirement plan options.
   d. Investing in the voluntary retirement plans is a good way to supplement my core retirement plan.
   e. I save for retirement outside of the university.

Demographics

9. What is your gender?

__Female

__Male

__Other

__I prefer not to answer this question

10. What is your age?

__18-29 years old

__30-49 years old

__50-64 years old

__65 years and older

11. What is your current marital status?

__Single, never married

__Married

__In a domestic partnership

__Separated

__Divorced

__Widowed

12. Which of the following best describes your employment status?

__full time

__part time

__temporary

__other

13. Which of the following best describes your level of education?

__Grammar school

__High school

__Some college

__Bachelor’s degree

__Master’s degree

__Doctoral degree

__Professional degree (MD, JD, etc.)

14. What is your income?

__Less than $10,000

__$10,000-$19,999

__$20,000-$29,999

__$30,000-$39,999

__$40,000-$49,999

__$50,000-$59,999

__$60,000-$69,999

__$70,000-$79,999

__$80,000-$89,999

__$90,000-$99,999

__$100,000 or more

Prize drawing participation

If you would like to be included in the prize drawing for one of four, $50 giftcards, please enter your first name, last name and contact information in the text box below. You are not required to answer this question. It is only for distribution of prizes.

Appendix D

Questionnaire (Loss Frame)

The University of Missouri offers a variety of retirement plan options to its employees.

The university offers a defined benefit to its benefit-eligible employees, those who are full-time employees working at least 30 hours per week with an appointment of at least nine months or more. This defined benefit is considered the core retirement plan. Employees who vested prior to Oct. 1, 2012 receive solely a defined benefit, also known as a pension. Employees who vested after Oct. 1, 2012 receive a defined benefit and defined contribution hybrid core retirement plan.

All employees, regardless of their benefit eligibility, may participate in the voluntary retirement plans. These voluntary retirement plans (401(a), 403(b), and 457(b)) serve as supplemental retirement savings for employees and are the focus of this survey.

This survey should take approximately 15 minutes to complete. Your responses will provide the university a better understanding of how to communicate with employees regarding the voluntary retirement plans. For those employees who complete the survey, and desire to be entered into a prize drawing, you will need to answer question #15. This question asks you to provide your name and how to best contact you. Your contact information will not be shared. It will only be used to distribute the prize. From the completed surveys that answer question #14, four names will be selected to receive a $50 giftcard.

Let’s get started!

Retirement can be a satisfying time in a person’s life. Unfortunately many people do not invest in their financial future. They often feel they do not have money to spare to put into savings. Sometimes they prefer not to think about it until later years, which may be too late. And, sometimes they may choose the instant gratification of spending all of their money now rather than saving to support their retirement years. When a person reaches retirement age and there isn’t enough money to support their independence without their job, they are generally forced to continue working. They do not have the freedom to choose what they want to do, as they may have envisioned for their retirement years. Instead of traveling, volunteering, or spending extra time with their families, they will likely continue working until their health no longer allows them to do so.

1. Indicate below how strongly you agree or disagree with each statement (5=strongly agree and 1=strongly disagree).

   a. Retirement planning makes me optimistic for my future.
   b. Having experts willing to help me plan for retirement makes the process manageable.
   c. If I save money now for my retirement years, I will feel confident in my future financial wellbeing.
   d. If I do not have a voluntary retirement plan account, I am confident I will create one in the next year.
   e. If I have a voluntary plan account, I am confident I will increase my contributions to the account in the next year.

f. Based on my salary, I am confident I can save at least 1 percent toward retirement.
g. I feel confident I will contribute more than 1 percent toward my retirement.

Retirement investing isn't easy. The language is complex. The plan rules are difficult to comprehend. And, usually takes a financial expert to help navigate the process. The retirement staff is available to help you understand your overall plan options. If you need a more detailed plan, there are financial advisors available for free on every campus. The advisors have certain days they are available, with appointments that fill up quickly. To get started, your first step is to visit the retirement website and become familiar with the university plan offerings. The second step is to call the retirement staff with any questions you have. The third step is to schedule an appointment with a financial advisor. And the last step is to start saving for your future!

2. Indicate below how strongly you agree or disagree with each statement (5=strongly agree and 1=strongly disagree).

a. Retirement planning is important to my financial future.
b. When I set goals, I often achieve them.
c. I feel confident I can do the four steps listed in the paragraph above.
d. I feel confident having experts to help me navigate retirement planning.

e. I feel confident I can save money now for my retirement.
f. If I do not have a voluntary retirement plan account, I am confident I will create one in the next year.
g. If I have a voluntary plan account, I am confident I will increase my contributions to the account in the next year.
h. Based on my salary, I am confident I can save at least 1 percent toward retirement.
i. I feel confident I will contribute more than 1 percent toward my retirement.

3. Choose the statement that best describes your participation in the voluntary retirement plans (401a, 403b, or 457b).

__I am currently contributing to a voluntary retirement plan.

__I am not currently contributing to a voluntary retirement plan.

__I have in the past contributed to a voluntary retirement plan.

__I have never contributed to a voluntary retirement plan.

4. If you currently contribute to a voluntary retirement plan, indicate the percentage of your salary in which you contribute to your chosen plan (401a, 403b, or 457b). You may write your deferral percentage in the box below.

5. Choose the statement that best describes your contribution level in the voluntary retirement plans (401a, 403b, or 457b) in the next year.

__I plan to maintain my contribute level.

__I plan to increase my contribute level.

__I plan to decrease my contribute level.

6. If you do not currently have a voluntary retirement account through the university, do you plan to create an account within the next year?

7. If you intend to create a voluntary retirement plan account through the university within the next year, indicate the percentage of your salary in which you will contribute to your chosen plan (401a, 403b, or 457b). You may write your deferral percentage in the box below.

8. Indicate below how strongly you agree or disagree with each statement (5=strongly agree and 1=strongly disagree).

a. I am financially responsible (pay my bills on time, use credit cards sparingly, etc.)

b. I know how much money I need to save for my retirement years.

c. I understand the university-sponsored voluntary retirement plan options.

d. Investing in the voluntary retirement plans is a good way to supplement my core retirement plan.

e. I save for retirement outside of the university.

9. What is your gender?

__Female

__Male

__Other

__I prefer not to answer this question

10. What is your age?

__18-29 years old

__30-49 years old

__50-64 years old

__65 years and older

11. What is your current marital status?

__Single, never married

__Married

__In a domestic partnership

__Separated

__Divorced

__Widowed

12. Which of the following best describes your employment status?

__full time

__part time

__temporary

__other

13. Which of the following best describes your level of education?

__Grammar school

__High school

__Some college

__Bachelor’s degree

__Master’s degree

__Doctoral degree

__Professional degree (MD, JD, etc.)

14. What is your income?

__Less than $10,000

__$10,000-$19,999

__$20,000-$29,999

__$30,000-$39,999

__$40,000-$49,999

__$50,000-$59,999

__$60,000-$69,999

__$70,000-$79,999

__$80,000-$89,999

__$90,000-$99,999

__$100,000 or more

Appendix E

Codebook.

Question Number	Question	Values
1	Retirement can be a satisfying time in a person's life. It is often the period when a person has the freedom to focus on doing things they enjoy--traveling, volunteering or working part-time. After spending a career working hard, retirement can be a fulfilling and much-anticipated reward. People who save money in a retirement account earlier in their career years, are much more likely to be financially secure after they retire. Indicate below how strongly you agree or disagree with each statement (1=strongly disagree and 5=strongly agree).	
1.1	Retirement planning makes me optimistic for my future.	1-Strongly Disagree 2-Disagree 3-Neither Agree Nor Disagree 4-Agree 5-Strongly Agree
1.2	Having experts willing to help me plan for retirement makes the process manageable.	1-Strongly Disagree 2-Disagree 3-Neither Agree Nor Disagree 4-Agree 5-Strongly Agree
1.3	If I save money now for my retirement years, I will feel confident in my future financial well being.	1-Strongly Disagree 2-Disagree 3-Neither Agree Nor Disagree

		4-Agree 5-Strongly Agree
1.4	If I do not have a voluntary retirement plan account, I am confident I will create one in the next year.	1-Strongly Disagree 2-Disagree 3-Neither Agree Nor Disagree 4-Agree 5-Strongly Agree
1.5	If I have a voluntary retirement plan account, I am confident I will increase my contribution amount in the next year.	1-Strongly Disagree 2-Disagree 3-Neither Agree Nor Disagree 4-Agree 5-Strongly Agree
1.6	Based on my salary, I am confident I can save at least 1 percent toward retirement.	1-Strongly Disagree 2-Disagree 3-Neither Agree Nor Disagree 4-Agree 5-Strongly Agree
1.7	I feel confident I will contribute 1 percent toward my voluntary retirement plan account.	1-Strongly Disagree 2-Disagree 3-Neither Agree Nor Disagree 4-Agree 5-Strongly Agree
2	Retirement investing isn't something you have to do alone. The retirement staff is available to help you understand your overall plan options. If you need a more detailed plan, there are financial advisors	

	available for free each month on each campus. Appointment times are offered throughout the day, for your convenience. You don't have to be a financial whiz to make your money work for you--you have expert help at your fingertips. Indicate below how strongly you agree or disagree with each statement (1=strongly disagree and 5=strongly agree).	
2.1	Retirement planning is important to my financial future	1-Strongly Disagree 2-Disagree 3-Neither Agree Nor Disagree 4-Agree 5-Strongly Agree
2.2	When I set goals, I often achieve them.	1-Strongly Disagree 2-Disagree 3-Neither Agree Nor Disagree 4-Agree 5-Strongly Agree
2.3	I feel confident having experts help me navigate my retirement planning options.	1-Strongly Disagree 2-Disagree 3-Neither Agree Nor Disagree 4-Agree 5-Strongly Agree
2.4	If I do not have a voluntary retirement plan account, I am confident I will create one in the next year.	1-Strongly Disagree 2-Disagree 3-Neither Agree Nor Disagree 4-Agree

		5-Strongly Agree
2.5	If I have a voluntary retirement plan account, I am confident I will increase my contribution amount within the next year.	1-Strongly Disagree 2-Disagree 3-Neither Agree Nor Disagree 4-Agree 5-Strongly Agree
2.6	Based on my salary, I am confident I can save at least 1 percent toward retirement	1-Strongly Disagree 2-Disagree 3-Neither Agree Nor Disagree 4-Agree 5-Strongly Agree
2.7	I feel confident I will contribute 1 percent toward my voluntary retirement plan account.	1-Strongly Disagree 2-Disagree 3-Neither Agree Nor Disagree 4-Agree 5-Strongly Agree
3	Choose the statement that best describes your participation in the university's voluntary retirement plans (401(a), 403(b) and 457(b)).	1-I am currently contributing to a university voluntary retirement plan. 2-I am not currently contributing to a university voluntary retirement plan. 3-I have in the past contributed to a voluntary retirement plan. 4-I have never contributed to a university voluntary retirement plan.

4	Indicate the percentage of your salary in which you contribute to your chosen plan (401(a), 403(b) or 457(b)). You may write your deferral amount in the box below.	Fill in the blank
5	Choose the statement that best describes your intended contribution level in the voluntary retirement plans during the next year.	1- I plan to maintain my current contribution level. 2-I plan to increase my current contribution level. 3-I plan to decrease my current contribution level.
6	Do you plan to create an account within the next year	1-Yes 2-No
7	Indicate below the percentage of your salary that you will contribute to your chosen plan	Fill in the blank
8	Indicate how strongly you agree or disagree with each statement below (1=strongly disagree and 5=strongly agree).	
8.1	I am financially responsible (pay my bills on time, use credit cards sparingly, etc.)	1-Strongly Disagree 2-Disagree 3-Neither Agree Nor Disagree 4-Agree 5-Strongly Agree
8.2	I know how much money I need to save for my retirement years.	1-Strongly Disagree 2-Disagree 3-Neither Agree Nor Disagree 4-Agree 5-Strongly Agree

8.3	I understand the university-sponsored voluntary retirement plan options.	1-Strongly Disagree 2-Disagree 3-Neither Agree Nor Disagree 4-Agree 5-Strongly Agree
8.4	Investing in the voluntary retirement plans is a good way to supplement my core retirement plan.	1-Strongly Disagree 2-Disagree 3-Neither Agree Nor Disagree 4-Agree 5-Strongly Agree
8.5	I save for retirement outside of the university	1-Strongly Disagree 2-Disagree 3-Neither Agree Nor Disagree 4-Agree 5-Strongly Agree
9	What is your gender?	1-Male 2-Female 3-Other 4-I prefer not to answer this question
10	What is your age?	1-18-29 years old 2-30-49 years old 3-50-64 years old 4-65 years or older
11	What is your current marital status?	1-Single, never married

		2-Married 3-In a domestic partnership 4-Separated 5-Divorced 6-Widowed
12	Which of the following best describes your employment status?	1-Full Time 2-Part Time 3-Temporary 4-Other
13	Which of the following best describes your education level?	1-Grammar School 2-High School 3-Some College 4-Bachelor's Degree 5-Master's Degree 6-Doctoral Degree 7-Professional Degree (MD, JD, etc.)
14	What is your annual income?	1-Less than $24,999 2-$25,000-$49,999 3-$50,000-$74,999 4-$75,000-$99,999 5-$100,000 or more