Improving Communication with Financial Consumers: Insights from a Study of Phone Call Phobia

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Abstract

A phone call phobia is a symptom of avoiding real-time communication that ranges from mild nervousness to a debilitating fear of making or receiving phone calls. The situation of avoidance of real-time communication, including phone call phobia, can potentially influence personal finance, particularly if it limits an individual's ability to communicate effectively with not only family, friends, and employers but also financial service providers. As the COVID-19 pandemic has affected ways of socializing and communicating, it is important to understand the situation and related factors of phone call phobia. This study, therefore, examined factors related to three types of phone call phobia (employer, family, and friends) and six types of communication preferences (face-to-face, phone calls, letters, email, text messaging, and online messaging apps). Using data from an online survey conducted in 2021, this study considered a list of comprehensive factors, including psychological factors, financial-psychological factors, financial status, job-related factors, health-related behavior, and demographic factors, in ordered logistic regression and seemingly unrelated regression estimation models. The findings provide insights to improve communication between financial consumers and financial services providers.

Recommended Citation

Heo, W., Liu, Y., & Lee, J. (2024). Improving communication with financial consumers: Insights from a study of phone call phobia. *Financial Services Review, 32*(4), 78-102.

Introduction

The COVID-19 pandemic has affected ways of socializing and communicating (Choi & Choung, 2021). The pandemic increased social isolation and a shift towards virtual communication (González-Padilla & Tortolero-Blanco, 2020), leading to more experiences of social anxiety in communication (Caporucio, 2020). This issue can be more serious and have long-term effects on younger generations, as they already have lacked face-to-face interactions and phone calls (Rousselle, 2022). Phone call phobia, a type of social anxiety disorder, can limit people's exposure to phone calls and face-to-face interactions (Liu et al., 2021). Phone call phobia refers to avoidance or being worried about answering a phone call (Bragazzi & Del Puente, 2014). Phone call phobia can range from mild

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nervousness to a debilitating fear of making or receiving phone calls (Liu et al., 2021).

Younger generations have grown up with digital tools and are more likely to experience social anxiety disorder, with avoidance of real-time communication being a significant symptom (Wang & Zhang, 2015). For instance, Generation Z is more likely to use digital communication tools (Auxier & Anderson, 2021) and struggle with real-time in-person communication (Pichler et al., 2021). The pandemic has aggravated phone call phobia in younger generations who have been more dependent on virtual communication in almost every aspect of their life (Silveira et al., 2022), including education, work, and social interaction with family, friends, colleagues, and even businesses or organizations. A shift to virtual communication also presents challenges to people who already have a phobia of real-time conversation, as virtual meetings can lead to feelings of fatigue, exhaustion, and discomfort caused by direct eye gaze (Karl et al., 2021). Phone call phobia can affect daily functioning related to work, school, and healthcare (Ozkan & Solmaz, 2015), as well as the acquisition of financial skills and engagement in real-time financial activities.

Within the field of personal finance, the pandemic's effect has not been evaded. With technological advancement, virtual communication trends, and pandemic isolation and social agility to changing situations, financial consumers often had to process virtual information themselves and make decisions based solely on types of information such as short videos without understanding or being provided with full contextual information (Zhang et al., 2023). Short-form videos (e.g., TikTok, YouTube Shorts, Facebook Reels, etc.) that were edited to meet time limits often omitted important information and highlighted only attractive or plausible messages, which can deliver misinformation to consumers (Tam et al., 2022). For example, some short-form video messages on social media can include incorrect financial knowledge and information, but correction or caution is rarely made (O'Sullivan et al., 2022).

This situation of avoidance of or limited real-time communication can influence many areas of life, including personal finance, particularly if one's ability to communicate effectively with financial educators and financial service providers is limited due to the macro environment or situation such as the pandemic. Individuals with phone call phobia may avoid making phone calls to their creditors or banks to address issues related to their finances, such as disputes over charges or changes to account terms (Braithwaite, 2019). Braithwaite (2019) criticized the situation that more people have begun preferring to use messaging apps instead of phone calls. This can lead to missed payments, late fees, and even damage to their credit score. Additionally, phone call phobia can also impact job opportunities and career growth, which can have a direct impact on personal finance. Although this can create many issues related to personal finance outcomes, little research exists to describe real-time communication and personal finance outcomes.

In this sense, it is important to capture a profile of phone call phobia during the pandemic and identify factors related to phone call phobia in personal finance, which can be later used for future studies and provide implications. This study, therefore, aims to (a) describe a profile of phone call phobia during the pandemic; (b) identify related factors in the realm of personal finance by incorporating financial, psychological, and sociodemographic characteristics; and (c) examine which communication methods would work well for those with phone call phobia when interacting with financial practitioners. The findings of this study provide insights to improve communication between financial consumers and financial services providers.

Research Questions

To understand phone call phobia issues during the pandemic and identify related factors in the domain of personal finance, this study takes financial and psychological characteristics, such as financial-psychological factors and financial status, into consideration in addition to psychological, job-related, health-related behavioral, and demographic characteristics. This study also examined which communication methods could work well for financial consumers when interacting with financial practitioners. Therefore, the research questions in this study are:

RQ1. Do psychological factors and financial-psychological factors result in people worrying about or avoiding answering phone calls?

RQ2. Does financial status make people result in people worrying about or avoiding answering phone calls?

RQ3. What is the preferred communication method for those with phone call phobia?

Literature Review

Phone call phobia often stems from fear or anxiety related to unexpected financial situations. Increased control over personal finances can alleviate anxiety surrounding phone calls, as individuals feel better equipped to handle any potential financial matters (Kamarudin et al., 2018) that may arise during a phone conversation. In this sense, having an emergency fund that shows a person's ability to deal with unexpected financial problems (Johnson & Widdows, 1985) and serves as a safety net in the face of unforeseen events (Anong & DeVaney, 2010) can contribute to a sense of financial security. Consequently, it relieves anxiety related to potential financial crises through an increased, perceived control over their financial issues (Kamarudin et al., 2018).

Psychological and Financial-Psychological Factors Associated with Phone Call Phobia

Psychological factors such as self-esteem and locus of control were considered because phone call phobia is a psychological symptom. The literature suggests that there exists a positive correlation between self-esteem and locus of control with self-confidence (Bunker, 1991; Jaaffar et al., 2019; Owens, 1993; Phares, 1962) and assertiveness (Sarkova et al., 2013; Williams & John, 1985), as well as stress (Galanakis et al., 2016; Pilisuk et al., 1993). This correlation may enable individuals to approach phone conversations with a more positive and proactive mindset, resulting in a reduced likelihood of experiencing phone call phobia. Moreover, those who exhibit high self-esteem are more likely to have proficient communication skills (Kang, 2017). They are more likely to engage in communication that is both efficacious and clear, enabling them to convey their thoughts, needs, and concerns confidently (Sarkova et al., 2013), which may alleviate phone call phobia. Moreover, individuals with high self-esteem have a lower fear of being rejected, are less concerned about others' opinions, and perceive others as accepting (Leary et al., 1995). Related research has confirmed that individuals who have a strong tendency to anxiously expect, perceive, and overreact to rejection tend to also suffer from low self-esteem (Ayduk et al., 2000).

Individuals who possess an internal locus of control tend to perceive themselves as having a greater degree of personal control over their lives and outcomes (Landau, 1995), while an external locus of control indicates a perception of outside factors such as luck and destiny as determinants of one's fate and outcomes. As a result, those with an internal locus of control tend to exhibit increased confidence in problem-solving abilities (Ng et al., 2006). This heightened sense of control may help lessen the anxiety associated with phone interactions and reduce the probability of developing phone call phobia. In general, understanding an individual's financial-psychological factors and psychological factors including their financial stress, financial satisfaction, self-esteem, and locus of control may be crucial in addressing their phone call phobia.

In addition, financial-psychological factors such as financial stress and financial satisfaction may serve as indicators of phone call phobia. Financial stress can relate to anxiety due to the fear of not meeting financial obligations or expectations (Lee et al., 2023). The fear of disappointing others or falling short of people's perceived financial expectations (even family and friends) may contribute to anxiety-inducing phone avoidance behavior. On the other hand, high financial satisfaction is associated with lower anxiety (Archuleta et al., 2013), a higher sense of control over financial life (Adiputra, 2021), and confidence (Atlas et al., 2019). Therefore, higher levels of financial satisfaction may alleviate phone call phobia, which could ease the pressure associated with phone conversations.

Financial Status and Phone Call Phobia

With financial discussions involving matters like medical expenses, major repair payments, or creditor interactions often occurring over the phone, having an emergency fund can help individuals gain more confidence in handling their finances when they take phone calls without

excessive fear or anxiety. Similarly, homeownership provides individuals with a sense of belonging (Liu et al., 2022) and represents a state of stability and control (Rohe & Stewart, 1996). An individual may feel more in control of their phone interactions and more empowered in their stable, safe, and private home environment (Kleinhans & Elsinga, 2010).

Taking more loans means having more financial responsibilities, which creates a sense of financial stress (Archuleta et al., 2013). Research has indicated a moderate association between debt and anxiety (Archuleta et al., 2013), and financial loans can exacerbate financial stress and worry (French & McKillop, 2017; Worthington, 2006). Lenders send payment reminders to borrowers via mobile phones (Bursztyn et al., 2019; Du et al., 2020), so having more loans entails more conversation about payments, negotiating repayment plans, and other financial issues, which can cause borrowers to hesitate to initiate or accept phone calls related to loans.

Behavioral and Demographic Factors Associated with Phone Call Phobia

Furthermore, research has indicated that health-related behavioral factors, including alcohol consumption (Higley et al., 1991; Pohorecky, 1981), soda intake (Zhang et al., 2019), and smoking (Morrell et al., 2006; Patton et al., 1996), can be associated with anxiety levels and thus may be relevant to phone call phobia. According to Koval and Pederson (1999), Schuck and Widom (2001), and Wilsnack and Wilsnack (1997), certain behaviors can serve as coping mechanisms or sources of temporary brief for anxiety symptoms. For instance, people who smoke may experience higher levels of anxiety in general (Patton et al., 1996), and this worry may extend to their interactions with other people. When people are unable to smoke while talking on the phone, the absence of their coping technique may cause their anxiety levels to increase (Jones & Heffner, 2022) and lead to phone call phobia. Consequently, by controlling for these variables, a more precise comprehension of the distinct influence of financial-psychological factors on phone call phobia can be attained, independent of potential confounding factors.

Notably, studies have indicated a positive correlation between job insecurity and heightened levels of anxiety and psychological distress (Gallie et al., 2017). This association was particularly pronounced during the COVID-19 pandemic (Ganson et al., 2021; Wilson et al., 2020). The phenomenon of phone call phobia may be impacted by job security, as it is posited that anxiety levels during work-related phone calls may be directly influenced by this factor. Individuals experiencing job insecurity may perceive uncontrolled, not-initiated telephone conversations as a possible threat to their employment status, resulting in heightened anxiety and avoidance behaviors.

Demographic variables may be associated with phone call phobia (Dienillah et al., 2018; Forgays et al., 2014; Hudson & O'Regan, 1994; Porath, 2011). It has been suggested that younger people may exhibit a greater inclination towards digital communication methods as they have grown up in a digital epoch (Porath, 2011). Conversely, individuals who are accustomed to telephone conversations as their predominant mode of communication are inclined to be more at ease with phone dialogues (Forgays et al., 2014). They may have refined their communication skills in navigating phone interactions. The perceived social expectations and financial stability of individuals during phone conversations may be influenced by their marital status, education, and income (Dienillah et al., 2018), which may affect their levels of anxiety during phone conversations. The number of children could contribute to additional stressors and obligations (Hudson & O'Regan, 1994), which may potentially influence their phone call phobia symptoms.

Communication Preferences and Phone Call Phobia

Previous research on communication preferences has extensively investigated how people choose between various modes of communication, such as face-to-face interactions, phone calls, letters, emails, text messaging, and online messaging apps like WhatsApp, Snapchat, and Facebook Messenger (Pierce, 2009; Robinson & Stubberud, 2012; Thayer & Ray, 2006; Yuan et al., 2016). These studies have shed light on the ever-changing nature of communication in modern culture. Face-to-face communication, for example, is highly

valued due to its richness and ability to effectively convey nonverbal clues, making it suited for complex topics (Meyer, 2006). While phone calls are extensively used, they can be influenced by the phenomena of "phone call phobia," influencing their communication method of choice (Bragazzi & Del Puente, 2014).

According to Schneider et al. (2002), the utilization of text messaging resulted in shorter responses, which were perceived as lacking in elaboration, as compared to face-to-face contact. Historically, letters and emails have served as conventional means for formal and business-oriented correspondence, while text messages and online messaging programs have emerged as convenient and instantaneous modes of communication in response to the demands of the contemporary, rapidly evolving digital landscape (Alvermann, 2002). Those who are financially stressed may prefer text messaging and online messaging apps, and they are not comfortable talking with others face-to-face (Pierce, 2009). When it comes to interacting with employers, various communication channels are effective for job satisfaction and relationships with employers (Braun et al., 2015; Westerman & Westerman, 2010). This implies that various communication channels are potentially associated with employees' emotional responses such as anxiety, avoidance, and stress. Similarly, conversations with friends and family members may also shift towards text messaging or instant messaging apps, which offer the comfort of composing messages at one's own pace (Brown & Michinov, 2017; Manago et al., 2019; Putnam, 2000). This switch to text-based communication may help individuals manage their social interactions and maintain connections, even while dealing with phone anxiety posed by phone call phobia. Some may even turn to traditional letters, finding comfort in the absence of real-time conversation.

Methodology

Data

The data used in this study were collected through an online survey conducted from January 12 to January 29, 2021, through an online survey agency. A random sampling method was used, with 5,906 individuals being contacted and 1,453 respondents participating in the survey. An online survey company randomly sends out survey invitations. Among those who respond to these invitations, the company detects and excludes responses from bots or insincere participants. Additionally, once a sufficient number of respondents from a specific demographic is reached, the survey design prevents further responses from individuals of the same demographic. The descriptive sample statistics are shown in Table 1. The average age of the sample was 45.61 (SD = 18.37) and the sample included 42.95% males and 57.05% females. The average number of children in a household was 1.08 (SD = 2.11). About half of the respondents were single (49.62%). In terms of health-related behavior, the majority of respondents reported that they did not drink alcohol. For instance, 631 respondents did not consume beer; 618 respondents reported not consuming wine; 290 respondents did not consume soda; and 814 respondents reported not consuming cigarettes. Although certain portion of respondents reported no consumption of beer, wine, soda, or cigarettes, the mean and standard deviation for are high because a portion of respondents reported a high consumption levels. For instance, trimming outliers reduced the means to more realistic values of s 4.86, 4.93, 10.22, and 11.96 for beer, wine, soda, and cigarettes, respectively. However, to avoid data distortion, respondents who consume high amounts of beer, wine, soda, and cigarettes were retained in our analysis.

Considering the relatively small gender disparity and the respondents' concentrated age range of mid-40s, the data can be considered representative of the average working middle-aged American populations. In addition, the sample's diverse communication preferences enable a comprehensive exploration of different communication modes' impact on phone call phobia. Including psychological factors like self-esteem and financial stress provides a comprehensive view of participants' well-being, aiding in understanding their influence on phone call phobia. Behavioral data on alcohol, soda, and smoking add valuable insights. Demographic diversity (age, gender, education, income) ensures the findings can be generalized across various population segments. Job insecurity and work status data help understand how employment conditions affect phone call phobia. Descriptions of the key variables are included in the next section.

Table 1. Sample Characteristics (N = 1,453)

Sample Characteristics	Mean	S.D.	Freq.	%
Phone call phobia				
By employer	.68	1.04		
By family	.72	.98		
By friends	.54	.82		
Communication preference				
Face-to-face	2.27	1.61		
Phone	2.56	1.22		
Letter	4.53	1.37		
e-Mail	3.80	1.28		
Text Messaging	3.30	1.56		
Online Messaging	4.54	1.67		
Psychological factors				
Self-esteem	28.78	5.33		
LOC	17.46	5.69		
Fin-Psycho factors				
Fin stress	63.00	26.64		
Fin satisfaction	22.02	7.30		
Financial status				
Emergency (= Have)			751	51.69%
Homeownership (= Own)			727	50.03%
Number of loans	1.12	1.29		
Job-related factors				
Job insecurity	19.71	3.91		
Work status (= Working)			857	58.98
Behavioral factors				
Alcohol (Beer)	10.45	20.86		
Alcohol (Wine)	10.63	21.17		
Soda	15.35	22.40		
Smoking	18.45	29.93		
Demographics				
Age	46.51	18.37		
Female			829	57.05%
Single			721	49.62%
Education				
Lower than high school			46	3.17%
High school			367	25.26%
Associate degree			435	29.94%
Bachelor's degree			424	29.18%
Graduate degree			181	12.46%
Income				
Lower than $15k			246	16.93%
$15k-$25k			214	14.73%
$25k-$35k			202	13.90%
$35k-$50k			203	13.97%
$50k-$75k			247	17.00%
$75k-$100k			154	10.60%
$100k-$150k			132	9.08%
Over $150k			55	3.79%
Number of children	1.08	2.11		

Measurements

Table 2 shows our variable measurements. For phone call phobia, three dichotomous items (yes, no) for each caller (employer, family, friends) were used based on previous studies (e.g., Howard & Sedgewick, 2021): (a) I feel nervous when my phone rings and it is from (employer, family, friends); (b) Phone calls from (employer, family, friends) give me anxiety; and (c) I prefer texting instead of calling (employer, family, friends). All three items were asked by each caller (employer, family, and friends, respectively). A sum of the total "yes" answers to questions by each caller (employer, family, friend) was used to measure phone call phobia. There were thus three phone call phobia areas: (a) phone call phobia by employer, (b) phone call phobia by family, and (c) phone call phobia by friends. Scores ranged from 0 (no phone call phobia) to 3 (highest phone call phobia).

Participants were asked to rank the order of their preferred communication methods. The following six communication methods were provided: (a) face-to-face, (b) phone call, (c) letter, (d) email, (e) text messaging, and (f) online messaging apps (e.g., WhatsApp, Snapchat, Facebook messenger). The rank ranged from 1 (most preferred) to 6 (least preferred). For the analysis, the ranks were converted to reverse coding (1 = least preferred; 6 = most preferred) for ease of interpretation (the higher the number, the more preferred communication method).

Psychological factors were measured with self-esteem and locus of control. Self-esteem was measured using 10 items on a 4-point Likert scale (total 10–40) from Rosenberg (1965), while locus of control was measured with seven items on a 5-point Likert scale (total 7–35) from Perry and Morris (2005). For financial-psychological factors, financial stress was measured with 24 items on a 5-point Likert scale (total 24–120) from Heo et al. (2020), while financial satisfaction was measured with seven items on a 5-point Likert scale (total 7–35) from Loibl and Hira (2005). As the job-related factors, job insecurity was measured with seven items on a 5-point Likert scale (total 7–35) from Hellgren et al. (1999), while work status was measured as whether respondents were working or not (1, 0).

Health-related behavioral factors include alcohol consumption of beer (total number of beer bottles to drink per week) and wine (total number of wine glasses to drink per week), soda consumption (total number of soda cans to drink per week), and smoking (average number of cigarettes to smoke per week). Demographic characteristics include age, gender (female = 1, male = 0), marital status (single = 1, otherwise = 0), education (less than high school = 1; high school graduate = 2; Associate degree = 3; Bachelor's degree = 4; graduate or higher = 5), income (lower than $15k = 1; $15k–$25k = 2; $25k–$35k = 3; $35k–$50k = 4; $50k–$75k = 5; $75k–$100k = 6; $100k–$150k = 7; over $150k = 8), and the number of children.

Analytics

Two analyses were conducted to answer the research questions. To test and answer RQ1 and RQ2, ordered logistic analyses were utilized. The regressions were estimated as (Model 1):

$$logit(P(Y \leq i) = a_i + b_{il} \sum Psy_{il} + b_{im} \sum FinPsy_{im} + b_{in} \sum Fin_{in} + b_{io} \sum Jobs_{io} + b_{ip} \sum Beh_{ip} + b_{iq} \sum Demo_{iq} + e_i$$

… Model 1

where Psy_l is psychological factors including self-esteem and locus of control; $FinPsy_m$ is financial-psychological factors including financial stress and financial satisfaction; Fin_n is financial status including emergency fund, homeownership, and number of loans; $Jobs_o$ is job-related factors including job insecurity and work status; Beh_p is behavioral factors including alcohol consumption, soda drinking, and smoking; $Demo_q$ is demographic factors; and i denotes the ordinal number of phone call phobia level. This study used a subsample analysis for employer-related phone call phobia after excluding those who are not working.

Table 2. Variable Measurements

	Item # and Types	Min-Max	Interpretation
Phone call phobia			
By employer	3 binary items; Total sum of 3 items	0 – 3	Higher score = higher level of phone call phobia
By family	3 binary items; Total sum of 3 items	0 – 3	Higher score = higher level of phone call phobia
By friends	3 binary items; Total sum of 3 items	0 – 3	Higher score = higher level of phone call phobia
Communication preference			
Face-to-face	1 item; 6-degree ranking; reversely coded	1 – 6	Higher number = More preferred
Phone	1 item; 6-degree ranking; reversely coded	1 – 6	Higher number = More preferred
Letter	1 item; 6-degree ranking; reversely coded	1 – 6	Higher number = More preferred
e-Mail	1 item; 6-degree ranking; reversely coded	1 – 6	Higher number = More preferred
Text Messaging	1 item; 6-degree ranking; reversely coded	1 – 6	Higher number = More preferred
Online Messaging	1 item; 6-degree ranking; reversely coded	1 – 6	Higher number = More preferred
Psychological factors			
Self-esteem	10 items; 4 points Likert style scale	10 – 40	Higher score = higher level of self-esteem
Locus of control	7 items; 5 points Likert style scale	7 – 35	Higher score = high level of external locus of control
Financial-psychological factors			
Financial stress	24 items; 5 points Likert style scale	24 – 120	Higher score = higher level of financial stress
Financial satisfaction	7 items; 5 points Likert style scale	7 – 35	Higher score = higher level of financial satisfaction
Financial status			
Emergency	Have = 1; otherwise = 0		
Homeownership	Own = 1; otherwise = 0		
Number of loans	Total number of loans	0 – 5	Higher number = higher number of loans
Job-related factors			
Job insecurity	7 items; 5 points Likert style scale	7 – 35	Higher score = higher level of perceived job insecurity
Work status	Working = 1; non-working = 0		
Health-related behavior			
Beer	Total number of beer bottles to drink; weekly average	0 – 100	
Wine	Total number of wine glasses to drink; weekly average	0 – 100	
Soda	Total number of soda cans to drink; weekly average	0 – 100	

Smoking	Total number of cigarettes to smoke; weekly average	0 – 100	
Demographics			
Age	Actual age	20 – 88	
Female	Female = 1; otherwise = 0		
Single	Single = 1; otherwise = 0		
Education			
Less than high school	Reference category		Less than high school = 1; High school graduate = 2; Associate degree = 3; Bachelor's degree = 4; Graduate degree or higher = 5
High school graduate			
Associate degree			
Bachelor's degree			
Graduate degree			
Income			
Less than $15K	Reference category		Less than $15k = 1; $15k-$25k = 2; $25k-$35k = 3; $35k-$50k = 4; $50k-$75k = 5; $75k-$100k = 6; $100k-$150k = 7; Over $150k =8
$15k-$25k			
$25k-$35k			
$35k-$50k			
$50k-$75k			
$75k-$100k			
$100k-$150k			
Over $150k			
Number of children	Actual number of children in a household		

To answer RQ3, seemingly unrelated estimation (SUE) was utilized (Model 2). The dependent variables were different across the estimated model, making the coefficients of each regression not directly comparable. We study used SUE estimation to make marginal effects obtained from separate regressions comparable (Weesie, 2000). SUE also estimates more robust coefficients because all six models (a–f) in Model 2 simultaneously estimate their coefficients by accounting for standard errors across six models. SUE was introduced to estimate the comparable coefficients across multiple regressions (Srivastava & Gilles, 1987) as follows:

$$Y_j = a_j + b_{jl}\sum Pphobia_{jl} + b_{jk}\sum Psy_{jk} + b_{jl}\sum FinPsy_{jl} + b_{jm}\sum Fin_{jm} + b_{jn}\sum Jobs_{jn} + b_{jo}\sum Beh_{jo} + b_{jp}\sum Demo_{jp} + e_j$$

… Models 2a to 2f

where, $Pphobia_l$ is phone call phobia including a call from an employer, family, and friends; and j is the communication method including face-to-face (Model 2a), phone (Model 2b), letter (Model 2c), e-mail (Model 2d), text messaging (Model 2e), and instant messaging apps (Model 2f). **Results**

Correlation Analysis

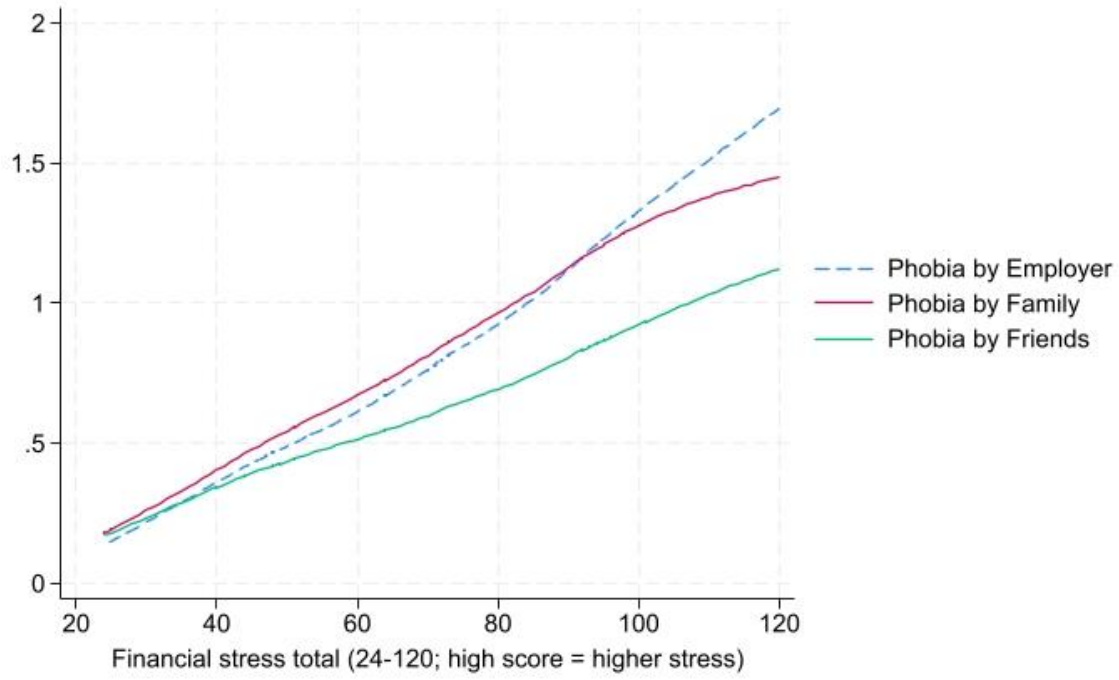
Before the ordered logistic regression analysis was undertaken, the correlation between each financial stress factors (i.e., affective response to financial stress; relational response to financial stress; physiological response to financial stress) and each type of phone call phobia (i.e., phone call phobia from employer, phone call phobia from family, phone call phobia from friends) was checked. Correlation tests were made to confirm the linearity of the relationships. As shown in Table 3, the association between financial stress and phone call phobia was significant. Figure 1 illustrates the Lowess smoothing graphs showing the linear associations between two selected variables (Cleveland, 1979; Royston & Cox, 2005).

Table 3. Correlation Between Financial Stress and Phone Call Phobia

	FSA	FSR	FSP	FS total	Emp Pb	Fam Pb	Frd Pb
FSA	1.00						
FSR	.74***	1.00					
FSP	.69***	.85***	1.00				
FS total	.89***	.93***	.92***	1.00			
Emp Pb	.36***	.36***	.35***	.39***	1.00		
Fam Pb	.32***	.36***	.37***	.38***	.43***	1.00	
Frd Pb	.27***	.28***	.29***	.31***	.45***	.62***	1.00

Note. FSA is the affective response to financial stress; FSR is the relational response to financial stress; FSP is the physiological response to financial stress; FS total is the total sum of FSA, FSR, and FSP; Emp Pb is phone call phobia from employer; Fam Pb is phone call phobia from family; and Frd Pb is phone call phobia from friends.

Figure 1. Phone Call Phobia by Financial Stress and Relationships



Financial and Psychological Factors Associated with Phone Call Phobia

As shown in Table 4, the relationship between financial stress and phone call phobia was significant and positive, as observed across all three types of callers: employers, family, and friends. This implies that individuals experiencing financial stress were more likely to exhibit a higher level of phone call phobia when it comes to interacting with three groups. When it comes to financial satisfaction, there was a partial association with phone call phobia, specifically in the context of phobia by friends. The result suggests that those with higher levels of financial satisfaction had lower odds of having a higher level of phone call phobia when interacting with friends. They were less likely to experience higher levels of phone call phobia.

The number of loans a respondent held was positively associated with the level of phone call phobia, particularly about interactions with friends. This means that individuals with more loans were more likely to experience higher levels of phone call phobia when communicating with their friends. However, emergency and homeownership were not significant. Job insecurity played a role in phone call phobia as well. Those with higher levels of job insecurity were more likely to experience higher levels of phone call phobia when communicating with employers. Furthermore, a respondent's work status had varying effects on phone call phobia depending on the caller. While those who were working were more likely to experience higher levels of phone call phobia when interacting with employers, they were less likely to experience higher levels of phone call phobia when interacting with family members and friends. This suggests that being employed contributes to higher levels of phone call phobia from employers, but it may alleviate the phobia from family and friends.

Self-esteem also played a role in phone call phobia, with a partial association in the context of phobia experienced when interacting with family members. The data indicates that individuals with lower levels of self-esteem were more likely to exhibit higher levels of phone call phobia when communicating with family. However, the external locus of control was not significant across types of phone call phobia models. Among health-related behavioral factors, higher levels of smoking were more likely associated with higher levels of phone

call phobia when communicating with both family and friends. This suggests that individuals who smoke more were more likely to experience higher levels of phone call phobia in their interactions with their family members and friends. However, alcohol and soda consumption were not significant.

Concerning the demographic factors, age was negatively related to the odds of exhibiting a higher level of phone call phobia. Older individuals were less likely to experience higher levels of phone call phobia, suggesting that they could be more familiar with (or comfortable using) phone calls than younger generations. Female respondents were more likely to experience higher levels of phone call phobia when interacting with friends. Some income categories had positive associations with phone call phobia when interacting with employers and family. High-income individuals may experience phone call phobia when interacting with employers and family due to several reasons. First, they often face high expectations and pressures at work and home, making phone calls stressful because they might feel the need to respond immediately or communicate perfectly. They also value their time and prefer efficient communication methods like emails or scheduled meetings, making unscheduled phone calls more stressful. Additionally, they might feel pressure to maintain a certain image or fear being judged based on their phone conversations. Similarly, individuals in low to moderate income groups ($15-25k, $25-35k, $35-50k, $50-75k) face unique pressures that could exacerbate phone call phobia. This group is acutely aware of their job security and financial situation, understanding that employer-initiated phone calls often carry negative connotations such as job performance feedback or termination. Unlike written correspondence or in-person meetings, phone calls can be a significant source of anxiety. Furthermore, these individuals may be overwhelmed by the demands of both their job and family life, making phone calls an additional stressor. This heightened awareness and experience can intensify anxiety around phone interactions in both professional and personal settings. However, marital status, education, and the number of children were not significant. Overall, our findings highlight the complex relationships between financial factors, job insecurity, work status, and communication contexts. These associations have implications for those interested in gaining a better understanding of financial stress and satisfaction related to individuals' communication patterns.

Table 4. Ordered Logistic Regression Results (Model 1)

	Emp Pb n = 857		Fam Pb n = 1,453		Frd Pb n = 1,453	
	B	*SE*	*B*	*SE*	*B*	*SE*
Psychological factors						
Self-esteem	-.02	.02	-.06***	.02	-.03	.02
Locus of control	.02	.02	.02	.01	.00	.02
Financial-psychological factors						
Financial stress	.02***	.00	.01***	.00	.01**	.00
Financial satisfaction	-.01	.01	-.01	.01	-.02*	.01
Financial status						
Emergency	-.12	.16	.09	.13	-.01	.13
Homeownership	-.02	.17	-.20	.14	-.17	.14
Number of loans	.11	.06	.08	.05	.14*	.05
Job-related factors						
Job insecurity	.06**	.02	.02	.02	.01	.02
Work status	-	-	-.33*	.14	-.35*	.14
Health-related behavior						
Beer	.00	.01	.01	.00	.00	.01
Wine	-.01	.01	.00	.00	.00	.00
Soda	-.00	.00	.00	.00	.00	.00
Smoking	.00	.00	.01***	.00	.01*	.00
Demographics						
Age	-.03***	.00	-.03***	.00	-.04***	.00
Female	-.07	.15	.15	.12	.27*	.13
Single	-.10	.15	.03	.12	-.23	.13
Education (Less than high school)						
High school	-.30	.47	-.15	.32	.03	.33
Associate degree	-.06	.48	.14	.32	.10	.33
Bachelor's degree	-.12	.49	.30	.33	.28	.34
Graduate degree	.23	.52	.20	.36	.12	.37
Income (Less than $15k)						
$15k-$25k	.69*	.28	.74***	.19	.22	.20
$25k-$35k	.27	.28	.76***	.20	.16	.21
$35k-$50k	.57*	.28	.82***	.21	.33	.22
$50k-$75k	.50	.28	.51*	.21	.09	.21
$75k-$100k	.46	.30	.40	.25	.26	.25
$100k-$150k	.57	.34	.31	.28	.48	.28
Over $150k	.22	.44	.03	.38	.07	.37
Number of children	-.04	.03	.05	.03	-.01	.03
Intercept 1	.95	.98	-.96	.74	-1.33	.77
Intercept 2	1.99	.98	.52	.74	.56	.77
Intercept 3	2.85	.98	1.54	.74	1.41	.77
Chi^2	194.96***		458.83***		307.90***	
Pseudo R^2	.09		.14		.11	

Preferred Communication Method Considering Phone Call Phobia

Table 5 presents the coefficients and standard errors for Model 2 (2a, 2b, 2c, 2d, 2e, 2f) that examined the associations between phone call phobia by employers and preferred communication methods. Mixed results were observed across the models. Those who exhibited higher levels of phone call phobia when interacting with their employer preferred phone calls and letters, while they preferred text messaging and instant messaging apps as their communication methods. Those with higher levels of phone call phobia when interacting with family preferred text messaging. Those with higher levels of phone call phobia when interacting with family were more likely to prefer text messaging. Furthermore, no significant associations were observed between preferring other communication methods (phone, letter, email, text messaging, and online messaging) and phone call phobia within the family context. Those who exhibited higher levels of phone call phobia when interacting with friends preferred face-to-face and phone communications, while they preferred text messaging and instant messaging apps.

Concerning psychological factors, external locus of control was negatively related to email preference, meaning that those believing that outside factors, luck, or destiny determine and control one's fate and outcomes rather than individuals having control over their actions and outcomes were less likely to prefer email. For financial-psychological factors, those with higher levels of financial stress were less likely to choose face-to-face as the preferred communication method but more likely to choose email as their preferred communication method. Higher levels of financial satisfaction were negatively related to the letter while positively related to text messaging as the preferred communication method. For financial status factors, having an emergency fund was negatively related to face-to-face communication preference. The number of loans was negatively associated with phone calls and letters while positively related to online messaging apps as the preferred communication method. Higher job insecurity was positively related to text messaging preference. For health-related behavior, those with higher levels of beer and soda consumption were less likely to choose letters as their preferred method of communication, while higher beer consumption was positively related to having a text messaging preference. Higher smoking levels were positively related to letters, emails, and online messaging as the preferred communication method.

For demographic factors, older respondents were less likely to choose face-to-face, phone calls, letters, and email as their preferred methods but more likely to choose text messaging and instant messaging apps. Females were more likely to report a preference for face-to-face and email communications, but they were less likely to choose text messaging and instant messaging apps as their preferred communication channels. Those having a higher education level compared to those with less than a high school, except a high school diploma, were less likely to choose email as their preferred communication method. Some income groups were less likely to choose text messaging and instant messaging apps as their preferred methods, while those with a higher number of children were more likely to prefer email communication. However, self-esteem, homeownership, work status, wine consumption, and marital status were not related to preferred communication methods.

In summary, the observed associations between phone call phobia and preferred communication methods varied by with whom they communicate and with what type of communication methods were used after controlling for psychological, financial-psychological, financial status, job-related factors, health-related behavior, and demographic characteristics. These findings indicate not only the factors related to preferred communication methods, but they also highlight the association between phone call phobia and communication preferences when approaching financial consumers.

Table 5. SUE Results

	Model 2a (Face-to-Face)		Model 2b (Phone)		Model 2c (Letter)		Model 2d (Email)		Model 2e (Text Messaging)		Model 2f (Online Messaging)	
	Robust B	*Robust SE*	*Robust B*	*Robust SE*	*Robust B*	*Robust SE*	*Robust B*	*Robust SE*	*Robust B*	*Robust SE*	*Robust B*	*Robust SE*
Phone call phobia												
By employer	-.06	.05	-.12**	.04	-.16***	.04	.02	.04	.16***	.04	.16**	.05
By family	-.11	.06	-.09	.05	.01	.05	.08	.05	.11*	.05	-.01	.06
By friends	-.15*	.07	-.16**	.06	-.07	.05	-.03	.06	.19**	.06	.22**	.07
Psychological factors												
Self-esteem	.00	.01	.00	.01	.00	.01	.00	.01	.00	.01	.01	.01
Locus of control	.01	.01	.01	.01	-.02	.01	-.02*	.01	.01	.01	.01	.01
Financial-psychological factors												
Financial stress	-.01*	.00	.00	.00	.00	.00	.00*	.00	.00	.00	.00	.00
Financial satisfaction	.00	.01	.00	.01	-.01*	.01	-.01	.01	.03***	.01	.00	.01
Financial status												
Emergency	-.19*	.10	.00	.07	.07	.08	-.07	.08	.08	.09	.12	.09
Homeownership	-.09	.10	.03	.08	-.05	.09	.05	.08	.13	.09	-.07	.10
Number of loans	-.01	.04	-.06*	.03	-.07*	.03	.00	.03	.03	.04	.11**	.04
Job-related factors												
Job insecurity	.00	.01	-.01	.01	-.01	.01	-.01	.01	.03*	.01	.01	.01
Work status	-.08	.10	.02	.08	.11	.08	.09	.08	-.06	.09	-.08	.10
Health-related behavior												
Beer	.00	.00	.00	.00	-.01***	.00	-.01	.00	.01**	.00	.01	.00
Wine	.00	.00	.00	.00	.00	.00	-.01	.00	.00	.00	.00	.00
Soda	.00	.00	.00	.00	-.01*	.00	.00	.00	.00	.00	.00	.00
Smoking	.00	.00	.00	.00	.00**	.00	.00**	.00	.00	.00	.00**	.00
Demographics												
Age	-.01***	.00	-.01***	.00	-.01*	.00	-.01***	.00	.01***	.00	.03***	.00
Female	.45***	.09	.10	.07	.11	.07	.15*	.07	-.49***	.08	-.31***	.09
Single	.04	.09	-.13	.07	-.03	.08	.00	.07	.08	.08	.05	.09

Education (Less than high school)												
High school	.08	.24	-.01	.17	-.13	.19	-.25	.18	-.11	.25	.42	.26
Associate degree	.03	.24	.08	.17	.03	.20	-.39*	.18	-.01	.25	.26	.26
Bachelor's degree	.12	.25	.07	.18	.16	.20	-.44*	.18	-.13	.25	.22	.27
Graduate degree	.11	.27	.12	.19	.19	.22	-.57**	.20	.12	.27	.02	.29
Income (Less than $15k)												
$15k-$25k	.21	.15	-.07	.12	-.01	.13	.21	.12	-.01	.14	-.32*	.14
$25k-$35k	.27	.15	.02	.11	.02	.13	.14	.12	-.23	.15	-.23	.15
$35k-$50k	.39*	.16	.15	.12	.19	.13	.14	.12	-.38**	.14	-.49**	.15
$50k-$75k	.10	.15	.14	.12	.19	.13	.23	.12	-.28*	.14	-.38*	.15
$75k-$100k	.38*	.19	.00	.14	.11	.15	.34	.15	-.22	.17	-.61**	.18
$100k-$150k	.32	.19	.37	.15	.34	.16	-.05	.16	-.30	.17	-.69**	.20
Over $150k	.30	.24	.08	.16	.10	.22	.17	.21	-.46	.24	-.19	.26
Number of Children	.00	.02	-.02	.02	-.02	.02	.04*	.02	.02	.02	-.01	.02
Intercept	2.50***	.60	2.77***	.45	5.63***	.48	5.11***	.46	1.89**	.58	3.10***	.60
F	4.97***		6.53***		6.98***		4.87***		10.95***		11.01***	
Adjusted R^2	.08		.11		.11		.08		.18		.18	

Discussion and Conclusion

Financial Status, Job Insecurity, and Financial Effect

Our findings suggest that financial characteristics (i.e., financial status, job insecurity, and financial-psychological factors) were the major factors contributing to higher levels of phone call phobia. This brings the attention of financial service providers to a potential communication hurdle. Significant factors were all associated with personal finances, such that (a) a respondent has a higher level of financial stress and a lower level of financial satisfaction, (b) a respondent has a higher number of loans, and (c) a respondent has a higher level of job insecurity or not working status.

First, the current study reveals a relationship between financial stress and phone call phobia, regardless of the caller's identity (RQ1). The presence of perceived psycho-physiological symptoms due to one's own financial situation can relate to a phone call phobia experience. For example, those with higher levels of financial stress were more likely to experience higher levels of phone call phobia when interacting with employers. Financial stress may relate to worry or pressure about work performance and create elevated levels of anxiety in interactions over the phone with employers. It appears that overall financial stress interferes with social and interpersonal relationships. Those with higher levels of financial stress were also likely to experience higher levels of phone call phobia with family and friends. This aspect may show the interconnectivity between financial stress and other areas of life across types of interpersonal and social relationships. For those who feel higher levels of financial stress, alternative ways to reach out to them should be considered.

Our findings also show that the presence of phone call phobia resulting from social interactions with friends may be mitigated by higher levels of financial satisfaction, as it can help alleviate anxiety and concerns associated with conversations, including financial aspects, relating to other areas of life. The results may be related to the positive association between life satisfaction and interpersonal relationships. For example, Proctor and Linley (2014) found that youths with higher levels of life satisfaction can have positive life outcomes, such as adaptive psycho-social functioning, better interpersonal and social relationships, fewer behavioral problems, and better academic achievement. Higher financial satisfaction as an important aspect of life can make one feel more competent and confident in social interactions without comparing their financial situation to others' or feeling envious (Issa, 2023). As a result, this reduced pressure can curb the hesitancy to participate in telephone conversations with friends, thereby promoting deeper social interactions and interpersonal connections.

Second, our findings support the role of financial status in explaining different levels of phone call phobias (RQ2). The total number of loans was associated with the probability of experiencing higher levels of phone call phobia, particularly about calls from friends. Although this study did not measure the amount of debt directly, the higher number of loans may represent financial situations that can make debtors experience greater levels of financial instability or challenges. As individuals experience higher levels of debt, they may have a diminished willingness to communicate with others outside their immediate familial sphere, which would affect interpersonal relationships with their friends. This phenomenon can be attributed to the likelihood of receiving calls from debt collectors or discussing their financial issues with others, including friends, leading to heightened discomfort when communicating over the phone. This finding indicates that financial status can contribute to phone call phobia levels, potentially attributable to an individual's social interactions and communication patterns in broader domains.

Third, our findings show that if someone worries about their job security, the person will likely experience higher levels of phone call phobia. Receiving a phone call from employers generally occurs in a professional context and may entail a discussion about work-related subjects, such as job responsibilities, deadlines, or performance feedback. For individuals who are already concerned about their employment status, these phone calls can serve as stimuli that increase their anxiety level. The work status was also identified as a factor of phone call phobia by employers despite mixed results. When respondents were

working, they were likely to experience lower levels of phone call phobia when communicating with family and friends, while they were more likely to experience higher levels of phone call phobia when communicating with their employer. This implies that a working person avoids phone calls from an employer but does not avoid phone calls from family or friends. This may reflect different characteristics and content of phone calls at work for the hierarchical relationship between employer and employees, which can make employees feel a heightened sense of pressure to perform work-related responsibilities during phone calls.

However, employed individuals may feel more confident and comfortable communicating with their family and friends. This can be attributed to the emotional support and establishment of a safe environment that family and friends typically offer even if they are stressed out at work from phone calls with employers. However, if they were not working, this may create another pressure or burden of communicating even with family and friends over the phone, which may be related to their lack of confidence or complex situations without employment.

Psychological, Behavioral, and Demographic Effects

Findings from the current study suggest that high self-esteem is negatively associated with phone call phobia, particularly about receiving phone calls from family members. This phenomenon could be attributed to individuals with high self-esteem who have a stronger sense of self-assurance and self-acceptance. They often exhibit a more positive outlook on life (Caprara & Steca, 2005), associated with enhanced emotional stability (Crowe et al., 2016), while they are less likely to be overly concerned with external opinions (Leary et al., 1995), including prescriptive and prohibitive advice from family. This emotional resilience and reduced concern about judgment or criticism from others enable them to engage in phone conversations, thereby reducing the probability of experiencing phone call phobia symptoms. The finding may also reflect the familiarity and supportive nature inherent in family relationships. The family relationship and established bonds reduce the anxiety associated with phone conversations, as individuals feel more accepted during such interactions over the phone. After all, family members are frequently perceived as a source of support and approval, particularly when confronted with challenges.

Our health-related behavior findings indicate that individuals who smoked more exhibited a higher level of resistance to receiving phone calls from family and friends. As a coping method, smokers tend to smoke more frequently when anxious (Hughes et al., 1990) and believe that smoking can reduce anxiety or distress levels (Zvolensky et al., 2001). Smokers are more likely to demonstrate higher levels of distress than nonsmokers (Parrott, 1999). In this sense, those smoking more frequently may present higher levels of distress and anxiety in general, experiencing phone call phobia. Family and friends' concerns and expectations may result in smokers' discomfort with phone calls as smokers may feel frustrated with or unable to handle their close ones' concerns and expectations.

Furthermore, findings suggest that age may play a role in reports of high phone call phobia. In comparison to younger respondents, older respondents were less likely to experience elevated levels of phone call phobia. Aging is generally associated with maturity (Camberis et al., 2014) and a broader range of life experiences and responsibilities in social and personal relationships that they cannot avoid. They could have more experience communicating over the phone than younger people with more alternative communication channels, not leading to experiencing phone call phobia in any circumstance.

Communication Method Preference

Regarding RQ3, text messaging was the preferred communication method for those with phone call phobia regardless of the type of interaction. This may explain why text messaging is so widely used and a preferred communication method when communicating with employers, family, and friends. Online messaging apps were also preferred by those with phone call phobia in employer and friend relationship situations.

A letter was not a preferred communication method for those with an employer interaction phone call

phobia; this might be because typically a letter from an employer may contain more formal (and often negative) information. Letters, as a legal form of documentation, may include more crucial information or a unique situation (e.g., termination of employment). Those with higher levels of employer phone call phobia preferred virtual communication through online messaging apps. This may reflect the widespread use of messaging apps in business settings. As the rise in remote work has led to an increased dependence on mobile devices to stay connected, third-party messaging apps are widely used within organizations that can streamline communication and increase collaboration among team members (Bibb, 2023), although this type of communication can create privacy and data breach issues (Goldstein, 2023). Face-to-face communication was only significant among those with phone call phobia when interacting with friends. Having interactions with friends can be optional and involves alternatives that can be more freely chosen; they can use text messaging and online messaging apps with their friends.

In general, our findings show that phone calls and letters were less preferred across most determinants including phone call phobia, psychological, financial-psychological, financial status, job-related, health-related behavior, and most demographic factors, while text messaging and online messaging apps were preferred across those determinants except for gender and income. As the non-phone call phobia factors showed, findings indicate trends in communication methods based on convenience (e.g., mobile use) and control over conversations (e.g., choosing when to communicate).

Implications

Phone call phobia can potentially influence personal finance outcomes, particularly if it limits an individual's ability to communicate effectively with financial service providers. Thus, financial services providers should understand financial consumers' phone avoidance or phone call phobia and implement more effective communication strategies to approach them. To effectively communicate with clients, financial services providers should first build trust and rapport with their clients. Financial services providers should demonstrate empathy and create a safe environment for discussions about financial matters by understanding factors related to levels of phone call phobia and a client's preferred communication approach. This approach strengthens relationships and facilitates open dialogue, thereby empowering clients to express their concerns and goals with greater ease.

Even though regulators, such as The Financial Industry Regulatory Authority (FINRA), the U.S. Securities and Exchange Commission (SEC), and the Certified Financial Planner Board of Standards (CFP Board), require some forms of communication to be documented via letters (sometimes in the form of a certified letter), financial service providers should explore other communication channels for day-to-day interactions. Financial service firms are expected to establish and implement policies and procedures to manage client interactions across diversified communication channels while protecting informational security. Recent enforcement actions by the SEC highlight the importance of these policies. The SEC has imposed significant penalties on firms for misuse of personal devices and lack of record keeping (SEC, 2023). To mitigate risks, the SEC suggests that financial firms should communicate digital communications rules including permissible and prohibited behaviors in electronic messages to their employees. Additionally, understanding client and business partner communication preference is recommended to assess potential risks and update their policies accordingly (SEC, 2018). For example, financial service firms may need to provide official phone numbers for client contact as outlined in agreement letters to facilitate phone and text messaging in their agreement letter while maintaining compliance. These channels may help financial professionals tailor their approach to meeting clients' needs. Financial services providers should also develop proficient communication techniques to address the anxiety caused by phone call phobia based on trust and individualized communication channels. This personalized communication style can foster stronger interpersonal relationships, cultivate trust, and facilitate open and effective communication.

Limitations

This study provides insights into phone call phobia and its association with various personal finance factors and outcomes. Nevertheless, it is important to acknowledge certain limitations in this research. First, this study employed a cross-sectional design, which limits its ability to establish causality. To strengthen future research, a longitudinal design would be recommended to capture changes over time and to establish more robust causal relationships. Second, the study's reliance on self-reported data for psychological factors, communication preferences, and alcohol, soda, and smoking consumption may introduce potential biases and measurement error. For example, the high variability in alcohol, soda, and smoking consumption complicates analysis and interpretation. Moreover, the sample's demographic imbalances in education and income and lack of detailed contextual information could constrain the generalizability of the results. To mitigate these limitations, future research should consider employing objective measures, expanding sample diversity, and collecting more in-depth contextual data. Third, although this study attempted to examine a comprehensive list of factors associated with phone call phobia, there could have been other variables, such as personality traits, prior traumatic experiences, or other psychological disorders that could have changed the direction and magnitude of some of the results reported in this study. Future research should take into consideration these and other theoretically associated factors.

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