**Why Comply? Risk and Efficacy Perceptions Drive Compliance in Mass Marketing Scams**

Stacey Wood1, David Hengerer2, Yaniv Hanoch3, Pi-Ju Liu4, Patricia Xi5, Joshua Paul2, and Lukas Klapatch2

*1Psychology, Scripps College, Claremont, USA; 2 Psychology, Claremont Graduate University, 3 Business School, University of Southampton, 4School of Nursing, Purdue University, 5Psychology, Knox College, Galesburg, USA*

Authors note: The authors declare that there are no potential conflicts of interest with respect to the research, authorship, and/or publication of this article. This work was supported by a Scripps College research Grant to Professor Stacey Wood.

Data available on request from the authors.

Please address all correspondence to Professor Stacey Wood

swood@scrippscollege.edu

Data available on request from the authors.

Abstract  
**Why Comply? Risk and Efficacy Perceptions Drive Compliance in Mass Marketing Scams**

Using a mix-method design, we examined participants’ willingness to respond to mass marketing scams (MMS). In Experiment 1, we examined the effect of age (young versus older) and letter style (“hot” versus “cold”) on the intention to respond. The intention of responding was negatively associated with risk (*p*< .001) and having at least a high school education was positively associated with perception of benefits (b= .684, *p*< .001). In Experiment 2, we examined reward sensitivity on the intention to respond by manipulating reward amounts (low versus high) and the presence of an activation fee. The presence of an activation fee decreased intent to contact, but percentages remained high (25.75%). Analyses of qualitative data indicated that risk and benefit were both predicted by perceived self-efficacy. The results indicate that consumers’ beliefs about their ability to control the outcomes of future interactions affected how they behaved when provided with MMS materials.

Keywords: Elder Financial Exploitation, Fraud, Consumer Decision-Making

**Introduction**

The emergence of COVID-19 around the world not only had major health impacts but has also led to a proliferation of scams. Scams in time of disaster are not new, as similar trends were evident after Hurricane Katrina and the devastating tsunami in the Indian Ocean. COVID-19 related scams, in fact, have only highlighted this grave phenomenon, with millions of victims around the world and an estimated loss of over $3 trillion per year (Finance Monthly, 2018; Gee & Button, 2019; Sweet, 2018). Scams not only extract high financial cost, but are also associated with serious health and mental problems, such as depression, suicidal ideation and behavior, and poor physical health (Button, Lewis, & Tapley, 2009; Fraud Advisory Panel, 2015). Why people respond, or not respond, to scams has been largely an open question. By extracting both quantitative and qualitative data, the present work was designed to provide a much richer understanding of why people respond to or comply with scams and thus assist in future development of preventive measures.

Fraud against individuals and organizations alike has been on the rise (PwC, 2018). One particularly pervasive and insidious type of fraud is the mass-market scam (MMS). MMS refers to any fraud scheme that uses one or more mass-communication methods such as mail, email, and scam robocalls (The United States Department of Justice, n.d.). Many people can attest to getting spam mail/email with an offer that sounded too good to be true or a notification that they have won a prize. Indeed, the UK National Crime Agency (NCA) reports that in England and Wales alone more than 3.4 million incidents of fraud were registered in a single year. However, the NCA believes that only 20% of incidents have actually been reported (Ipsos, 2020; National Crime Agency, n.d.). These scams are especially pervasive because the losses consist of amounts so small (typically less than $100) that consumers frequently do not report them to law enforcement.

Despite the ubiquitous presence of MMS (and many other kinds of scams), relatively little psychological research has been completed to understand the factors involved in the decision to respond to a potentially illegitimate offer. Yet, given the extent of the phenomena and its financial and psychological cost, understanding why some people fall prey while others remain resilient is of great theoretical and practical importance. Previous work has identified several possible factors, including the nature of the MMS and individual characteristics of the victims (Anderson, 2019). About the MMS solicitations, one key feature that scammers have manipulated is the prize amount and activation fee (Wood et al., 2018). That is, scams tend to differ, among other things, in the amount that they claim that an individual has won, and in whether they ask for an activation fee, which tends to be either small ($5) or large ($100).

Arguably, the prize amount should be the chief reason for responding to these MMS. In contrast, an activation fee might deter some while others might view it as a sign of authenticity and legitimacy. Indeed, in an earlier study by Wood and colleagues (2018), participants viewed solicitations that differed in the amount of prize money they offered ($50K versus $500K) as well as the amount of activation fee ($5 versus $100). Results showed that prize amount had little to no impact on the intention to respond, while, in contrast, activation fee (whether small or large) significantly reduced the intention to respond to these solicitations. The study, furthermore, reported that regardless of the amount of prize or activation, the main driving force explaining participants intention to respond was their perception of risk (negatively related) and perception of benefit (positively related) of the MMS. What is less understood is how consumers are making these subjective judgments regarding risk and benefit and whether these key factors could be utilized for the development of preventive measures.

A second feature of MMS solicitations is that they are often designed to evoke a strong emotional response from readers, an idea that fits well with Cialdini’s (2006) principles of persuasion. Kircanski and colleagues (2018) conducted a study to examine the impact of emotional manipulation on the likelihood of responding. They simulated these fraud techniques by manipulating emotional arousal through a computer-based gambling task that could be rigged to induce either gains or losses. Older adults were more likely to express interest in deceptive advertisings versus younger adults. However, under conditions of increased arousal (both positive and negative), both older and younger adults indicated significantly greater intention to purchase the advertised items (Kircanski et al., 2018). Mueller and colleagues (2020), while not directly manipulating the emotional context of the solicitation, examined whether emotional intelligence can serve as a protective factor against falling prey to scams. Their study revealed that, overall, participants who scored higher on “ability” emotional intelligence, or emotion related cognitive abilities were less susceptible to scams. More importantly, their results suggest that emotional intelligence plays a more important protective role compared to cognitive (or decision) ability.

Intention to respond to MMS is not only contingent on the scam design and features, but on who reads them. In other words, personal characteristics could play a crucial role in explaining tendencies to fall prey to scams. One factor that has received some attention is age, with some claiming that old age is linked to greater susceptibility to fraud, while other researchers offering a more nuanced understanding. The study by Mueller and colleagues (2020), for instance, revealed no age differences in the likelihood of responding to different types of financial fraudulent solicitations. Anderson (2004, 2007, 2013, 2019), based on data from the Federal Trade Consumer survey, has reported that individuals aged 55 and over were, in fact, less likely than younger consumers to have been victims (see also DeLiema, Fletcher, Kieffer, Mottola, Pessanha, & Trumpower, 2019; Fletcher & Pessanha, 2016; Holtfreter, Reisig, & Pratt, 2008; Schoepfer & Piquerro, 2009).

In contrast to the literature above, a survey by Fletcher and Pessanha (2016) reported that 80% of participants assumed that fraud victims are those who are 65 years of age. Cohen (2008), likewise, has argued that older adults are more likely to be targeted by scammers and have higher rates of victimhood, estimating that 5.6% of adults over the age of 65 will be targeted within a 5-year period. Indeed, a systematic review and meta-analysis by Burnes and colleagues (2017) has claimed that older adults are not only more likely to be targeted by scammers but are more likely to become a victim (see also Peterson et al., 2014; Wood & Lichtenburg, 2016). It is possible that divergent results stem from differences in survey sampling frames, the types of scams that are measured, how the questions are framed, and differences in the rates of disclosing victimization experiences between younger and older adults.

Aside from age, researchers have tested a wide range of measures that might help explain individual differences in responding to scams. Wood and colleagues (2018), for example have included numeracy and loneliness scales, but neither factor helped explain willingness to respond to scam solicitations. Anderson (2004, 2007, 2013, 2019) reported that self-control (see also Modic & Lea, 2013), overconfidence, and race (being African American) are linked to greater likelihood of being a victim. Using a range of other measures, Jones and colleagues (2015) have identified sensation seeking and cognitive ability as possible culprits.

One of the key findings from previous work is that the main driving force in responding to MMS is the perceived risks and perceived benefits of the solicitation (Mueller et al., 2020; Wood et al., 2018). These results are nicely aligned with a large corpus of data showing that what drives risky behavior is the perceived risk and perceived benefit of the activity. Hanoch, Johnson, and Wilke (2006) have found that what differentiates between risk-takers and non-risk-takers in a range of domains is their perceptions of the risks and the benefits associated with the activities (smoking, gambling, or bungy jumping). Slovic (2000), likewise, has long championed the idea that to better understand risky behavior, we must capture and evaluate people’s perception of the risks and the benefits of different activities and policies. Yet, most of the literature on risk perception has tended to evaluate individuals risk perception by asking them to rate (on a Likert type scale) how risky or beneficial they perceive a given activity. They have largely failed to ask participants what the perceived risks or the benefits are. In other words, this corpus of data lacks some sort of verbal protocol or qualitative response indicating what individuals deem to be the actual risks and the benefits. There is an even greater dearth of studies evaluating what consumers view as the benefits and the risks of responding to MMS, and whether different MMS evoke different risk and benefit perception. The present mixed-methods study was designed to bridge this gap.

One of the main champions of using qualitative approaches to understand decision making has been Herbert Simon. Among his corpus of work, he has continuously argued that the addition of a verbal protocol, for example, could be of immense help in trying to decipher how people make decisions (Ericsson, & Simon, 1984). Using verbal protocol, Sarasvathy, Simon, and Lave (1998), have been able to show that entrepreneurs and bankers view and approach financial risk differently. Likewise, Kühberger and Wiener (2012) have relied on qualitative approaches to reveal that people tend to avoid risk when placed under prevention focus and favored risk under promotion focus, and Highhouse (1994) has drawn on qualitative techniques to examine decision under ambiguities. Here, we capitalize on this idea to extract verbal data from participants as to which information in the MMS they deem to be risky and which beneficial. While our study was inspired by this line of work, we do acknowledge that our qualitative protocol is more limited in its scope. Here, we asked participants to indicate their perceived risks and benefits to different MMS.

We designed two experiments that evaluated consumers’ responses to sweepstakes solicitations. In Experiment 1, we created two prototype solicitations with varying levels of invoked emotional arousal, one “cold” (not emotionally arousing), and one “hot” (emotionally arousing). In Experiment 2, we also manipulated benefit (low versus high reward or prize) and risk (activation fee). Most importantly, we not only collected quantitative information regarding the participants’ perception of the potential benefits and risks of the solicitation, but we purposely asked participants to include qualitative statements about their perceptions of benefits and risks in order to better understand consumer decision making. Both experiments assessed individual difference measures including demographic variables and profound bullshit receptivity. Past research has found that individuals who are more receptive to profound bullshit “are less reflective, lower in cognitive ability (i.e., verbal and fluid intelligence, numeracy), are more prone to ontological confusions and conspiratorial ideation, are more likely to hold religious and paranormal beliefs, and are more likely to embrace complementary and alternative medicine” (Pennycook, Cheyne, Barr, Koehler, & Fugelsang, 2015, p. 559). In the current study, we use an explanatory sequential design as the qualitative data was collected after the quantitative findings to assist with the interpretation of the underlying phenomenon (see Figure 1).

We predicted a main effect for age with higher rates of intention to comply in older adults than young adults and a main effect for emotional arousal with higher rates of intention to comply in the “hot” versus “cold” condition. Finally, we predicted that individuals’ rating of risks and benefits of the offer as well as poorer bullshit detection (higher scores), and lower education would be related to increased intention to comply with the MMS solicitation. In terms of qualitative results, we did not have a priori hypotheses regarding the findings but used the results to guide interpretations generally.

**Methods**

***Materials***

*Solicitations*

Two different versions of two sample solicitations were developed based on 25 real scam solicitations from active cases that were “successful” at hooking the victim (see Appendix A). These letters, which were designed to look like letters sent in the mail, were identical in content but were manipulated to appear either “hot” with color, pictures of “winners”, and other illustrations, or “cold” with a more business-like style and low affective cues. Klapatch, Hanoch, Wood, and Hengerer (2022) have subsequently validated this approach with a cluster analysis of a large sample of solicitations and reported 4 distinct types including a Cluster 3 type letter to represent “hot”: very colorful, high reward salience, sweepstakes prize, and Cluster 4: Low emotionality, cold, more business type letter to represent “cold.” (p. 9)

Participants were then asked, “After reading this solicitation, how likely are you to contact the activation number” on a 7–point Likert scale ranging from extremely likely (7) to extremely unlikely (1). Next, they were asked two open-ended questions: (1) “In your opinion, what are the benefits of responding to this letter?” and (2) “In your opinion, what would be the risks to responding to this letter?” Participants were then asked to make quantitative ratings of risks and benefits on a 10–point Likert scale before completing several scales (Appendix B). Two independent raters, who were trained using a predetermined coding dictionary (Appendix C– the coding dictionary was developed following the analyses for the previous phase of this program of research, Wood and colleagues, 2018), both reviewed the full text of each participant’s qualitative comments to each of the questions and used a binary yes/no matrix to assess whether the response met coding dictionary criterion for each code. The resultant matrices were assessed for agreement. In the event of a disagreement, an arbitration under the oversight of the first author occurred, in which all disagreements were resolved such that both coders had the same code for all items.

*Demographics*

Participants were asked their age, gender, ethnicity, income, employment status, education, and marital status.

*Profound Bullshit Receptivity Scale (PBRS)*

A 10-item scale that assesses agreement with syntactically correct statements that may appear profound but with a closer read are vacuous. For example, the statement “Hidden meaning transforms unparalleled abstract beauty” has a correct syntactic structure and appears wise but has no actual meaning.  This scale was included only in Experiment 1.

*Debriefing*

We explained the goal of the study. A link to learn more about the prevention of MMS was also provided as part of the debriefing.

***Procedures***

Participants in both experiments were recruited through Amazon’s Mechanical Turk (MTurk). Results obtained through MTurk are reliable and comparable to those obtained by using hand-completed surveys (Casler, Bickel, & Hackett, 2013; Gibson, Piantadosi, & Fedorenko, 2011). All participants were residents of the United States. Upon selecting the study on MTurk, participants were redirected to a Qualtrics site and were shown and told to read through a consent form. If they agreed to the terms and consented, they proceeded to the solicitation, and then completed the various study materials in the order presented in the materials section. Finally, participants were debriefed in which we explained the goal of the study and provided a link to learn more about the prevention of MMS as part of that debriefing and provided a survey code to enter in MTurk, at which point they were paid $.50 for their participation.

***Experiment 1***

*Participants*

Participants were 393 adults recruited on Amazon’s Mechanical Turk (age ranged from 20 to 98 years old, *M* = 37.75, *SD* = 11.40; *M* = 65.82, *SD* = 5.62, for younger adults between age 18 to 59 and older adults above age 60 respectively[[1]](#footnote-1)). The original sample size was 401 but 8 participants’ responses were excluded because the qualitative responses were vague or nonsensical, they completed the survey in an extremely short time, or they failed to provide any demographic information for a final sample size of n = 393 (see Table 1 for demographic information).

***Experiment 2***

Given that we did not see age effects, we dropped age as a variable of interest in Experiment 2. Because participants have consistently indicated that their ratings of benefit and risk most closely relate to their interest in the solicitation, we designed Experiment 2 to emphasize benefits and risks. We also collected and analyzed qualitative comments to better understand information used by consumers to subjectively estimate risks and benefits. In this experiment, we manipulated reward / prize by creating a low ($50K) and high ($500K) reward / prize condition to further understand the impact of perception of reward / benefit. We hypothesized that if participants are reward sensitive, we would see greater intention to comply in the high reward / prize condition. Alternatively, participants could be using the reward amount as a heuristic for legitimacy. In that case, the high reward may trigger risk as well and be less appealing. We also manipulated risk by adding an activation fee condition, such that participants would either need to pay $0 or $100 to access the prize money, with the $100 activation fee indicative of high risk. We hypothesized that individuals who were willing to call and pay $100 in the “high fee” activation condition may represent a distinct group especially vulnerable to MMS. All other aspects of the design were identical to that of Experiment 1 although without the PBRS measure.

*Participants*

Participants were 299 adults (age ranged from 19 to 83 years old, *M* = 34.62, *SD* = 10.9) recruited on Amazon’s Mechanical Turk. The original sample size was 359, but 60 participants’ responses were excluded because their qualitative answers were vague, nonsensical, or non-existent, or they failed the manipulation check (i.e., Was there an activation fee in the letter you read? If yes, how much was the fee?). For full demographic information, see Table 7.

*Materials*

The study materials were like that used in Experiment 1 although the PBRS was not included. Qualitative responses were collected in a similar manner to Experiment 1.

*Procedure*

Following informed consent, participants were randomly assigned to one of four conditions (no activation fee / $50K Reward, no activation / $500K reward, $100 activation fee / $50K reward, $100K activation fee / $500K reward). Approximately half of the participants received the “hot” letter and half received the “cold” letter from Experiment 1.

**Results**

***Proposed Analyses***

The main effects and interactions for Age Group (young/old) and Letter Condition (hot/cold) (Experiment 1) were evaluated using 2x2 factorial analysis of variance looking at intention to respond. Additionally, each predictor variable was regressed, using linear models, against the outcome variables (intention to respond), and a further stepwise linear model including all of the predictors (added in one by one) was also conducted. Model comparisons were conducted after each step, and the resultant model was the overall best fitting model for the data. Quantitative analyses for Experiment 2 also included one-way ANOVAs for presence/absence of activation fee and for reward amount on intention to respond, but did not include age group as a factor. Otherwise, Experiment 2 quantitative analyses were the same as those used in Experiment 1.

***Experiment 1***

Overall, close to 38.42% (151 individuals) of the sample indicated intention to contact the scammers (15.27% somewhat likely, 9.66% likely, 13.49% very likely). Notably, there was no main effect for age (*F*(3,389) = 0.04, *p* = 0.828, ηp2 = .0001) or emotional arousal (“hot” versus “cold”; (*F*(3, 389) = 2.95, *p* = .08, ηp2 = .007) on the intention to contact the MMS, nor was there a significant interaction (*F*(3, 389) = 0.33, *p* = 0.565, ηp2 = 0.0008). Higher levels of education were predictive of lower likelihood of expressing intention to respond to the solicitation. Participants who had a high school degree/GED (b = -2.398, *p* =0.011), Associate’s degree (b = -2.611, *p* = 0.006), Bachelor’s degree (b = -2.636, *p* = 0.006), Master’s degree (b = -2.483, *p* = 0.011), or Professional degree/PhD (b = -2.465, *p* = 0.016) were less likely to respond to the solicitation as compared to participants who had less than a GED. Additionally, being a student was a significant positive predictor of participants’ intention to respond (b = 1.43, *p* = .039). Other individual difference measures assessed including numeracy and other demographics were not significant predictors of the participants’ responses (see Table 2). Profound bullshit receptivity was a significant predictor in that individuals who scored higher (endorsing more pseudo profound statements) were more likely to respond to the solicitation. Participant age did not independently predict intention to contact the sender of the solicitation, (b = .002, *p* = .736).

Individuals also rated the risks and benefits of the solicitation. Participants’ likelihood of positively responding to the solicitation was significantly related to their assessment of risk (b = -.872, *p* < .001, R2adj= .416) and benefits (b= .8, *p* < .001, R2adj= .617) such that lower risk or higher benefit perception both predicted increased likelihoods to contact. A hierarchical regression model comparison between a model of all the above predictors except for risk and benefits and a model of all of the above predictors including risk and benefit indicated that including risk and benefit was a significantly better fit for the observed data, *Χ2* = 337.49, *p* < 0.001, R2change = 0.639. Moreover, participant age did not independently predict risk rating ((b= .007, *p* = .154) or benefit rating (b= -.009, *p* = .175).

*Experiment 1 Qualitative Analyses*

Participants were asked, “In your opinion, what are the benefits of responding to this letter?” Seventy-one percent indicated that winning money was a specific benefit, and 63.5% thought it was a legitimate offer. Participants were also asked, “In your opinion, what would be the risks to responding to this letter?” Sixty-one percent indicated that the solicitation was potentially a scam, and 39% expressed concern that the solicitation was about identity theft (see Appendix B for measures used). Additional qualitative analyses were conducted to further explore participants’ perceptions of risk and benefit associated with the solicitation letter, see exploratory results section below. The code list was initially developed during a prior research study that used a similar approach (Wood et. al, 2018). Codes at that time were developed by reviewing all responses and identifying emergent themes that occurred repeatedly. That initial code list was revised and modified after data collection from Experiment 1. The sample for this qualitative analysis is the same as the sample for Experiment 1, demographic information for this sample can be found at Table 1.

*Experiment 1 Qualitative Analysis of Risk*

Of the 393 participants who responded to the qualitative questions, 360 (91.60%) indicated perceiving some form of risk from the solicitation. Please see Table 3 for frequencies of each code in relation to the questions the codes were used to analyze, and Appendix D for sample quote from participants for each code.

We first examined data from individuals who indicated that there was some risk in the data, and next categorized the responses identifying the sources of the risk. Due to the non-normal distribution of perceived risk, all comparisons were conducted using non-parametric Mann-Whitney-Wilcox tests with continuity corrections. Differences existed in terms of how risky participants perceived the solicitation to be. Participants who recognized any form of risk, overall, tended to view the solicitation as riskier (*M = 5.53*) than did participants who did not recognize any form of risk (*M* = 3.06), *U* =1608.50, *p* <.0001. Participants who viewed the solicitation offer as a scam tended to rate it as riskier (*M* = 5.67) as compared to other participants (*M* =5.00), *U* = 15360, *p* < .001. A similar difference was found in how risky participants considered the solicitation to be between those who were concerned about identity theft (*M* =5.60) as opposed to those not concerned about identity theft (*M* =4.93), *U* = 15140, *p* <.01. Finally, participants concerned that the solicitation might lead to money loss rated it as riskier (*M =* 5.80) versus not (*M* = 5.21), *U* = 9738, *p* < .05. Overall, key risks identified by participants were monetary loss, legitimacy, and possible identity theft.

Next, participants were asked why they perceived the solicitation as risky. Please refer to Table 3 for frequencies of each code as they were applied to each question, and to Appendix D for sample quotes for each code. Differences existed in terms of how risky participants rated the solicitation as a whole: participants who specifically mentioned noticing errors in the spelling and/or grammar of the solicitation rated it as more risky (*M* = 6.19) as compared to those who did not (*M* = 5.26), *U* = 3350.50, *p* <.01. Additionally, participants who believed the offer to be too good to be true rated it as riskier (*M* = 5.97) versus not (*M* = 5.25), *U* = 5032.50, *p* < .01.

A hierarchical regression was conducted entering in one by one all the qualitative codes for risk, why risky, and the demographic variables collected as predictors of risk rating (Table 4). After each code was added to the model, a model comparison was conducted against the previous model – codes were carried forward if their inclusion resulted in a significant improvement in model fit. The best fitting model, presented here, is the sum of the codes that improved model fit upon their inclusion of the model. The model for risk rating indicates that higher risk ratings can be predicted by participant’s belief that the offer was “too good to be true” (*b* = .729, *p* <.01), concern that one’s private information or identity might be stolen (*b* = .654, *p* < .001), concern that responding to the solicitation would involve either a forced purchase or money loss of some form (*b* = .457, *p* <.05), and recognition that the solicitation is a scam (*b* = .629, *p* <.001); additionally, it is marginally significantly predicted by participants noticing spelling and grammar errors in the solicitation (*b* = .655, *p* = .055, *F*(5,385) = 9.962, *p* <.001, *R*2adj = .103). Please note that the model for risk perception did not explain a terribly large amount of the variance observed within risk rating. Partially due to this finding, additional codes for risk and why risky were considered and ultimately emerged during the coding process of the qualitative data in experiment 2 (self-efficacy, elements of the letter, did not enter contest).

*Experiment 1 Qualitative Analysis of Benefit*

Of the 393 participants who responded to the qualitative questions, 274 (69.72%) indicated perceiving some form of benefit from the solicitation. Please see Table 3 for frequencies of each code in relation to the questions the codes were used to analyze, and Appendix E for sample quote from participants for each code.

Differences existed in terms of how beneficial participants perceived the solicitation to be. However, due to the non-normal distribution of perceived benefit, all comparisons were conducted using non-parametric Mann-Whitney-Wilcox tests with continuity corrections. Participants who recognized any form of benefit, overall, as per the qualitative data, tended to view the solicitation as more beneficial (*M =*4.16) than those who did not (*M* = 1.39), *U* = 4634.5, *p* <.0001. Participants who believed the offer to be legitimate perceived the offer to be much more beneficial (*M* = 4.14) than not (*M* = 2.74), *U* = 11992, *p* < .0001. Finally, participants who were focused on the possibility of winning money rated the offer as more beneficial (*M* = 4.49) than did participants not blinded by fungible commodities (*M* = 2.24), *U* = 8385.50, *p* <.0001.

Participants were also asked why they perceived the solicitation as beneficial (or not). Please refer to Table 3 for frequencies of each code as they were applied to each question, and to Appendix E for sample quotes for each code. Differences existed in terms of how beneficial participants rated the solicitation as a whole: participants who recognized that the offer was a scam perceived significantly less benefit from it (*M* = 1.99) versus not (*M* = 3.88), *U* = 23348, *p* <.0001; and, participants who were overwhelmed by the magnitude of the reward perceived the offer to be much more beneficial (*M* = 5.52) than those who were not (*M* = 2.73), *U* = 4278.50, *p* < .0001.

A hierarchical regression was conducted entering in all of the qualitative codes for benefit and why beneficial and the demographic variables collected as predictors of benefit rating (Table 5). We did the same risk analysis as done in Study 1, The model for benefit rating indicates that higher benefit ratings can be predicted by a belief that the offer is legitimate (*b* = .856, *p* < .0001), focusing on the monetary reward (*b* = 1.368, *p* <.0001), being overwhelmed by the magnitude of the monetary reward (*b* = 1.677, *p* <.0001), and is inversely related to belief that the offer is a scam (*b* - -1.067, *p* <.0001), *F*(4,388) = 75.67, *p* <.0001, *R*2adj = .432.

Finally, a model was created predicting participant’s intention to contact the sender of the solicitation. This model included both quantitative variables and qualitative code variables and was compared to the best fit model from the quantitative analyses (Table 6). Similar to the quantitative model, risk (b = -.571, *p* < .001), and benefit (b = 1.336, *p* < .001), are significant predictors of solicitor contact in the combined model. Interestingly, being a student (b = 1.611, *p* < .05) or being unemployed (b = .358, *p* < .05) were both predictive of increased contact likelihood, as was recognition that the benefit of the solicitation offer was the prize money (*b* = .451, *p* <.01). Finally, lower scores on the profound bullshit scale (*b* = -.204, *p* < .01) and discovery of spelling and grammar errors in the solicitation (*b =* -.607, *p* < .05)were both predictive of lower contact likelihood, explaining variance above and beyond what was already explained solely by risk and benefit. Model comparison indicates that this model is a better fit for the data, (*Χ2diff* = 21.635, *p* < 0.01) than is the model including only the quantitative variables.

***Experiment 2***

Slightly over a quarter of the sample (25.75%) indicated some willingness (12.37% somewhat likely, 5.01% likely, 8.36% very likely) to call the contact number and pay the activation fee if requested. The presence of the activation fee affected participants reported willingness to respond to the MMS solicitation, *F*(1, 279) = 13.974, *p* < .001, η2 = .047; participants who read solicitations that did not have an activation fee in them (*M* = 3.12, *SD* = 2.17) reported greater willingness to respond to the solicitation than did participants who read solicitations that did include activation fees (*M* = 2.22, *SD* = 1.87).

A factorial analysis of variance was conducted to examine participants’ expressed intention to contact the sender of the solicitation based on the magnitude of the prize, the emotionality of the solicitation, and the presence or absence of the activation fee. There was no effect of reward size, as intention to respond to the solicitation did not differ between participants in the $50k reward condition (*M =* 2.66*, SD =* 1.94) and participants in the $500K condition (*M* = 2.79, *SD* = 2.18), (*F*(1,291) = 0.288, *p* = 0.591, η2 = 0.001). There was also no effect for emotionality of the solicitation. Participants who read “cold” letters (*M* = 2.54, *SD* = 1.94) did not report a different willingness to respond to the solicitation from participants who read “hot” letters (*M* = 2.89, *SD* = 2.13), (*F*(1,291) = 2.34, *p* = 0.127, η2 = 0.008). There was, however, a main effect for the presence of an activation fee. Participants whose solicitations did not have an activation fee expressed a greater willingness to contact the sender of the solicitation *(M* = 3.15, *SD* = 2.14) than did participants whose solicitations did contain an activation fee (*M =* 2.30, *SD* = 1.87), (F(1, 291) = 13.352, *p* < .001, η2 = .043). There were no significant interactions between the three factors. Additionally, none of the demographic variables independently predicted contact likelihood, except for participant age, (b = -.027, *p* < .05), a finding that indicates that younger adults were more likely to express interest in contacting the sender of the solicitation than were older adults.

Similar to Experiment 1, risk and benefit assessment affected participants’ responses, such that assessment of higher risk discouraged intent to contact (b = -.810, *p* < .001, R2 = .358), whereas higher benefit assessment was predictive of higher intent to contact (b = .593, *p* < .001, R2 = .413). Quantitative ratings indicated that intention to respond to the solicitation was significantly predicted by assessment of risk (b = -.766, *p* < .001) and benefit (b = .923, *p* < .001) even when controlling for emotionality, reward size, presence of activation fee, and all other demographic variables of interest (education, income, employment, age, and gender) (R2 change = .463 above and beyond other predictors). Interestingly, in this final model including all predictors, activation fee was no longer a predictor of contact (b = -.197, *p* = .242) (see Table 8). Finally, participant age did not independently predict risk rating (b = .008, *p* = .183), however, it did independently predict benefit rating (b = -.045, *p* < .001), such that younger participants were more likely to rate the solicitation as more beneficial, whereas older participants were more likely to rate the solicitation as less beneficial.

*Qualitative Comments Regarding Risk and Benefit Perception*

Results above further support the notion that perception of risks and benefits are the key factors in driving the decision on whether or not to respond. Next, we conducted an in-depth qualitative analysis of comments by participants regarding their risk and benefit assessments.

As part of the analysis of Experiment 2, codes based on emergent patterns of responses were added to the predetermined coding dictionary as they were discovered. Specifically, new codes were added to the pre-determined coding dictionary to cover participant’s belief in their own self-efficacy, which indicated participants’ belief that they could or could not carry out specific behaviors. In our study, the specific behavior of responding to the solicitation, i.e., “ I can call but hang up if I learn it’s a scam,” a recognition of a “logical flaw” in the elements of the letter itself (i.e., Target, Walmart, and Costco wouldn’t work together on a promotion like this, they are competitors), and the knowledge that they did not in fact enter any competition, so it is impossible for them to win were all added as codes during the initial coding process (see Appendix C for the coding dictionary). These codes were added partially out of necessity given the results of the risk qualitative analyses from Experiment 1, please see below.

The analyses used to explore participants’ risky/beneficial ratings included: frequencies to look at the data, t-tests looking at group differences in benefit/risk rating by qualitative codes, and regression models looking at the variance explained in benefit and risk rating as predicted by the various qualitative codes. Participants’ deidentified responses, along with the codebook, dataset, and r-script used for the analyses can be located at: (https://osf.io/2xaz5/).

*Experiment 2 Qualitative Analyses*

A total of 299 participants’ data were included in the Experiment 2 qualitative analysis. Participants’ data were excluded from the qualitative analysis if the participant: did not provide any qualitative responses or provided blank responses (n = 58, 16.16%), provided responses in Latin (n = 1, 0.3%), or provided the exact same response for every question (1 = 0.3%).

The sample for this qualitative analysis is the same sample as the one in Experiment 2 (demographic information can be found at Table 7).

*Experiment 2 Qualitative Analysis of Risk*

Of the 299 participants who responded to the qualitative questions, 287 (95.99%) indicated perceiving some form of risk from the solicitation letter. Please see Table 9 for frequencies of each code, broken out by the independent variables and participant demographic characteristics, and Appendix D for example quotes from participants for each of the codes.

Differences existed in terms of how risky participants believed the solicitation to be. Participants whose responses recognized any risk, overall, tended to view the solicitation as riskier (*M* = 5.87) versus not (*M* = 3.75), *t*(12) = -4.37, *p* < 0.001. Participants who believed the solicitation to be a scam viewed it as more risky overall (*M* = 6.01) than not (*M* = 5.52), *t*(262) = -2.72, *p* <0.01. Additionally, participants who were concerned with the solicitation necessitating a purchase viewed the solicitation as more risky (*M* = 6.44) than not (*M* = 5.46), *t*(296) = -6.79, *p* < 0.001.

Participants were also asked why they believed the solicitation letter to be risky (or not) (see Table 9 for frequencies of each code, broken out by the independent variables and participant demographic characteristics, and Appendix D for example quotes from participants for each of the codes). Looking at group differences in how risky participants rated the solicitation as a whole, the data reveal that participants who noticed spelling and grammar errors in the solicitation letter viewed it as more risky (*M* = 6.54) versus not (*M* = 5.76), *t*(24) = -4.59, *p* < 0.001. Participants who had past experience with solicitations similar to the study solicitation letter found the letter to be more risky overall (*M* = 6.38) than others did (*M* = 5.76), *t*(15) = -2.21, *p* <0.05. Participants who strongly believed in their ability to control the outcome of responding to the solicitation viewed the solicitation as less risky (*M* = 4.09) than other participants (*M* = 5.99), *t*(37) = 6.11, *p* < 0.0001. Participants who found logical flaws in the solicitation rated it as more risky as well (*M* = 6.41) versus not (*M* = 5.64), *t*(107) = -4.12, *p* <0.001. Finally, participants who mentioned not having entered any contests considered the solicitation more risky (*M* = 6.46) than other participants (*M* = 5.74), *t*(38) = -3.92, *p* <0.001.

A hierarchical regression was conducted to determine what of the variables best predicted participant risk rating (Table 10). After each code was added to the model, a model comparison was conducted against the previous model – codes were carried forward if their inclusion resulted in a significant improvement in model fit. The best fitting model, presented here, is the sum of the codes that improved model fit upon their inclusion of the model. The regression included all conditions, participant variables and qualitative variables and ultimately revealed that higher risk rating is predicted by the solicitation being “cold” and “business-like” (b = -.411, *p* < .05), the presence of activation fee (b = .383, *p* < .05), the participant being married (b= 0.385, *p* < .01), the participants’ believing in their ability to control the outcome of contacting the sender of the solicitation (i.e., “having” self-efficacy) (b = -1.671, *p* < .001), and detecting logical inconsistencies in the letter (i.e., that competing retail chains would work together to offer anything) (b= .430, *p* < .05), even when controlling for the other variables (*F*(5,292) = 16.61, *p*<.001, R2adj = .208).

*Experiment 2 Qualitative Analysis of Benefit*

Of the 299 participants who provided responses to the qualitative questions, 199 (66.56%) indicated perceiving some form of benefit from the solicitation letter (see Table 9 for frequencies of each code, broken out by the independent variables and participant demographic characteristics, and Appendix E for example quotes from participants for each of the codes). Participants whose responses indicated recognizing some overall benefit from the solicitation letter had higher mean beneficial ratings (*M* = 3.82) than not (*M* =1.77), *t(*267) = -9.38, *p* < 0.001. Similarly, participants who believed the solicitation to be legitimate (*M*= 3.84) rated the solicitation as more beneficial than did participants who did not (*M*=2.56) *t*(288) = -5.17, *p* <0.001; and participants who believed the solicitation was an opportunity for money (*M*= 4.18) found the solicitation to be more beneficial than did those participants who did not (*M* = 2.15), *t*(265) = -8.77, *p*< 0.001.

Participants were also asked why they believed the solicitation letter to be beneficial (or not). Please see Table 9 for frequencies of each code, broken out by the independent variables and participant demographic characteristics, and Appendix E for example quotes from participants for each of the codes.

Participants who did not believe the solicitation to be a scam rated it as more beneficial (*M* = 3.95) than others (*M* = 1.66), *t*(294) = 11.21, *p* < 0.001; and, participants who focused on the solicitation being a large sum of money believed it to be more beneficial (*M* = 3.84) than others (*M* = 2.56), *t*(288) = -5.18, *p* < 0.001.

A hierarchical regression was conducted to determine which of the variables best predicted participant benefit rating (Table 11). As described previously, the best fitting model included the codes that improved model fit. The regression included all conditions, participant variables, and qualitative variables. The best fitting model ultimately revealed that higher benefit ratings were predicted by the absence of an activation fee (b = -.536, *p* < .01), greater age (b= -0.03, *p*  < .01), participants’ believing in their ability to control the outcome of contacting the sender of the solicitation (i.e., “having” self-efficacy) (b = 1.156, *p* < .01), belief that the solicitation letter was a scam (b = -1.476, *p* < .001), the fact that the prize is in fact a lot of money (b = 1.608, *p* < .001), and an interaction between participants belief the solicitation was a scam and their personal self-efficacy (b = -1.478, *p* < .05), even when controlling for all other variables (*F*(6,291) = 32.85, *p*<.001, *R*2*adj*= .392).

Finally, a model was created predicting participant’s intention to contact the sender of the solicitation. This model included both quantitative variables and qualitative code variables and was compared to the best fit model from the quantitative analyses (Table 12). Similar to the quantitative model, risk (b = -.662, *p* < .001), and benefit (b = 826, *p* < .001), are significant predictors of recontact in the combined model. Interestingly, self-efficacy (b = .766, *p* < .01), and belief that the solicitation was a scam (b = -.559, *p* < .01), were also significant predictors, explaining variance above and beyond what was already explained solely by risk and benefit (*F* (4,293) = 88.67, *p* < .001, *R*2*adj* = .541). Additionally, activation is not a significant predictor of contact – also similar to the quantitative results. Model comparison indicates that this model is a better fit for the data, (*Χ2diff* = 27.955, *p* < 0.001) than is the model only including risk and benefit.

**Discussion**

***Experiment 1***

In summary, inExperiment 1, we found a high intention to comply rate, no effect of age or arousal manipulation, and that risk and benefit perceptions were strong predictors of intention to comply consistent with our previous studies. In addition, our data indicate that higher education levels were predictive of lower intention to comply. Finally, participants were drawn to the financial benefits of the solicitation but were also concerned about the possible risks of responding, such as identify theft. We did not see age effects in this study despite having sufficient power. Our results are aligned with previous work revealing that older adults are less likely than younger adults to fall prey to fraud (Office of National Statistics, 2017). We included the Profound Bullshit Receptivity Scale (PBRS) as an exploratory measure in this study. Our findings indicated that individuals who scored high (more receptive to profound bullshit) were more likely to respond to the solicitation (Pennycook, Cheyne, Barr, Koehler, & Fugelsang, 2015). Otherwise, these findings replicate our previous research findings that consumers evaluate these solicitations in terms of their perceptions of risk and benefit and act based on those subjective assessments.

Finally, and most importantly, we asked participants to indicate what are the risks and benefits of the MMS. Most of them identified the prize money—as expected—to be the main benefit. Furthermore, close to two-thirds (63.5%) of the sample indicated that the offer was legitimate. At the same time, a similar number of people judged the MMS as a possible scam, and 39% were worried that the solicitation was designed steal their personal information. These data provide important indication as to which factors people focus on when deciding whether to comply with the solicitation or not.

***Experiment 2***

Our results from Experiment 2 indicated that intention to contact the MMS solicitation remained high, albeit lower than it was in Experiment 1. Results from the mixed method data analysis indicated that in addition to participant’s ratings of risks and benefits, perceived self-efficacy was a new variable that emerged as a factor related to likelihood to contact the activation number. Interestingly, there was no difference between $50K or $500K in terms of likelihood to respond. We also find with the inclusion of qualitative data that consumers viewed the “cold” businesslike letter to be riskier than the hot letter.

It is highly likely that the reason the letter was perceived as riskier and that the intention to contact the MMS solicitation was lower was because of the $100 activation fee that was not present in Experiment 1.

In a similar study, the response rate without activation fees was 48.8 %, and with an activation fee, the response rate decreased to 25 %, so these rates appear to represent consumer sentiment (Wood et al., 2018).

**Conclusions and Limitations**

MMS continue to be a highly prevalent fraud, successfully scamming millions of consumers a year. Previous research indicated that consumers’ personal evaluation of risks and benefits is the strongest predictor of intention to respond (Wood et al., 2018). In the current study, we replicated these findings in two experiments. In addition, we build on this previous research by conducting an in-depth analysis of qualitative comments to better understand consumer’s assessment of risks and benefits. Our results from the exploratory qualitative comments were revealing. We learned that participants who strongly believed in their ability to control the outcome of responding to the solicitation, a trait we are calling self-efficacy, viewed the solicitation as less risky. These participants believe that they could call the number and “shut down” the process at any time, and because of this confidence, they are more likely to engage in risky behavior. These findings are in line with Pressman (2006) who suggested that investors’ overconfidence is at the root of the problem, though he lacked empirical evidence to support his ideas. Our results are also consistent with work by DeLiema, Shadel, and Pak (2020), who studied fraud among investors, and developed a model that incorporates the role of exposure, mindsets, and habits. The researchers found that investors who fell prey to fraud tend to engage in riskier investment activities overall, such as more frequent stock trading and remotely buying investment from unknown brokers. Likewise, Gamble, Boyle, Yu and Bennett (2015) suggested that poor assessment of declines in financial management results in a relative overconfidence in the area of financial management. This “competence” / “confidence” gap could provide scammers with enough of an opportunity to convert some of the “high efficacy” / “low competence” investors into victims, as they are willing to engage and may overestimate their abilities to control the interaction. Recent work with consumers who filed reports with the Better Business Bureau reveal that consumers who reject offers outright, those who engage but do not lose money, and those who engage and lose money reflect distinct groups in terms of risk factors (DeLiema, Fletecher, Kieffer, Mottola, Pessanha, Trumppower, 2019). More work is needed to better understand these subgroups of consumers.

In the current study, there were no effects for age. Older and younger consumers appear to be equally vulnerable to these solicitations. These results may appear at odds with the prevalent narrative of elder financial abuse. However, it may be that older adults have particular vulnerabilities that were not captured by the present investigation and are no more vulnerable after reading a single solicitation. Our results are aligned with previous work revealing that older adults are less likely than younger adults to fall prey to fraud (Office of National Statistics, 2017), although the loss could be more traumatic and less likely to be recovered. At the same time, an AARP study has found that older adults are more frequently the victims in sweepstakes scams and investment scams. However, this may reflect the targeting effort of the scammers. In line with DeLiema and colleagues (2020), lifestyle factors such as a history of playing the lottery and a history with legitimate sweepstakes may increase engagement. More research examining whether or not older adults are more susceptible to targeting efforts than younger adults is needed to understand this phenomenon. In terms of solicitation type (hot versus cold), there were no significant effects. Rates of intention to engage with the solicitation did not vary by type.

In this study, the appeal of winning drove much of the interest in the solicitation. However, the reward amount did not seem to matter. It may be that our manipulation was too weak, and a larger discrepancy may have impacted consumers decision making ($50K versus $500K). It is also possible that consumers are using MMS as an informal lottery, understanding that the chance of winning is quite low, but the rewards are high enough to overlook the risks. These findings are consistent with previous research (Wood et al., 2018).

Furthermore, few individual difference measures distinguished between those with higher and those with lower intention to comply. We replicated previous findings that low levels of education were related to intention to comply. We included a new scale, the PBRS, as an exploratory measure in Experiment 1 and see a robust relationship between endorsement of pseudo profound statements and likelihood to respond. This finding is independent of other measures and warrants further analysis of a potential cognitive vulnerability.

***Limitations***

There are several important limitations in the above experiments. The study materials used were not pretested on a “hot” versus “cold” scale. Rather they are consistent with findings from separate, published cluster analyses of the features and typologies of scam letters (Klapatch et al., 2022). In these experiments, the researchers labeled the letters based upon these features, and do not know if the hot versus cold conditions actually impacted the emotional state of the participants. Future research should include pre-testing and possible affective ratings to assure the manipulation was successful.

We also want to acknowledge that the MTurk sample tends to skew younger, and the mean age of the older adult sample is close to age 65. It is possible that a sample including more individuals in their 70’s and 80’s may have responded differently than the present sample.

As in previous projects, we appreciate that the delivery of sweepstakes offers through mTurk is artificial. However, our close analysis of the qualitative comments suggests that consumers were engaging with the materials as if they were “real”.

In summary, our research suggests that consumers continue to engage with risky offers despite high recognition that these solicitations are a scam. Future work examining consumer subtypes may be helpful to identify consumers who chose to engage with scams even though they are able to identify these solicitations as risky. Furthermore, our qualitative data provide important insights as to possible development of preventive measures. Indeed, there are little to no studies that have tried to experimentally reduce compliance. This is urgently needed, and our data speaks to several fruitful directions.

**References**

Anderson, K. B. (2004). *Consumer fraud in the United States: An FTC survey*. Federal Trade Commission. https://www.ftc.gov/sites/default/files/documents/reports/consumer-fraud-united-states-ftc-survey/040805confraudrpt.pdf

Anderson, K. B. (2007). *Consumer fraud in the United States: The second Federal Trade Commission Survey.* Federal Trade Commission. https://www.ftc.gov/sites/default/files/documents/reports/consumer-fraud-united-statessecond-federal-trade-commission-survey-staff-report-federal-trade/fraud.pdf

Anderson, K. B. (2013). *Consumer fraud in the United States, 2011: The third FTC survey. Federal Trade Commission*. https://www.ftc.gov/sites/default/files/documents/reports/consumer-fraud-united-states-2011-third-ftc-survey/130419fraudsurvey\_0.pdf

Anderson, K. B. (2019). *Mass-market consumer fraud in the United States: A 2017 update. Federal Trade Commission*. https://www.ftc.gov/system/files/documents/reports/massmarket-consumer-fraud-united-states-2017-update/p105502massmarketconsumerfraud2017report.pdf

Burnes, D., Henderson, C. R., Sheppard, C., Zhao, R., Pillemer, K., & Lachs, M. S. (2017). Prevalence of financial fraud and scams among older adults in the United States: A systematic review and meta-analysis. *American Journal of Public Health, 107*(8), e13-e21. https://doi.org/10.2105/AJPH.2017.303821.

Button, M., Lewis, C., & Tapley, J. (2009). *Fraud typologies and victims of fraud: Literature review*. *National Fraud Authority*. Portsmouth.

Casler, K., Bickel, L., & Hackett, E. (2013). Separate but equal? A comparison of participants and data gathered via Amazon’s MTurk, social media, and face-to-face behavioral testing. *Computers in Human Behavior*, *29*(6), 2156–2160. https://doi.org/10.1016/j.chb.2013.05.009

Cialdini, R. B. (2006). *Influence: The psychology of persuasion* (Revised edition). Harper Business.

Cohen, C. A. (2008). Consumer fraud and the elderly: A review of Canadian challenges and initiatives. *Journal of Gerontological Social Work, 46*(3-4), 137-144. https://doi.org/10.1300/J083v46n03\_08.

DeLiema, M., Li, Y., & Mottola, G. (2022). Correlates of responding to and becoming victimized by fraud: Examining risk factors by scam type. *International Journal of Consumer Studies,* 1-18.

DeLiema, M., Shadel, D., & Pak, K. (2020). Profiling victims of investment fraud: Mindsets and risky behaviors. *Journal of Consumer Research, 46*(5), 904-914. https://doi.org/10.1093/jcr/ucz020

Ericsson, K. A., & Simon, H. A. (1984). Protocol analysis: Verbal reports as data. The MIT Press.

Finance Monthly. (2018). *Fraud epidemic costs 3.2 trillion globally*. https://www.financemonthly.com/2018/07/fraud-epidemic-costs-3-2-trillion-globally/

Fletcher, E. & Pessanha, R. (2016). *Cracking the invulnerability illusion: Stereotypes, optimism bias, and the way forward for marketplace scam education*. BBB Institute for Marketplace Trust. https://www.bbb.org/globalassets/shared/media/truth-about-scams/bbb-scamprogramwhitepaper-08-digital-0630.pdf

Fraud Advisory Panel. (2015). *Supporting the victims of fraud: The year in review 2014-2015*. London.

Gamble, K. J., Boyle, P., Yu, L., & Bennett, D. (2015). Aging and financial decision making. Management Science, 61(11), 2603-2610. http://dx.doi.org/10.2139/ssrn.2165564

Gee, J. & Button, M. (2019). The financial cost of fraud 2019: The latest data from around the world. Crowe. http://www.crowe.ie/wp-content/uploads/2019/08/The-Financial-Cost-of-Fraud-2019.pdf

Gibson, E., Piantadosi, S., & Fedorenko, K. (2011). Using mechanical turk to obtain and analyze English acceptability judgments. *Linguistics and Language Compass*, *5*(8), 509–524. https://doi.org/10.1111/j.1749-818X.2011.00295.x

Hanoch, Y., Johnson, J. G., & Wilke, A. (2006). Domain specificity in experimental measures and participant recruitment: An application to risk-taking behavior. *Psychological Science*, *17*(4), 300–304. https://doi.org/10.1111/j.1467-9280.2006.01702.x

Highhouse, S. (1994). A Verbal Protocol Analysis of Choice under Ambiguity. Journal of Eco- nomic Psychology, 15, 621-635.

Holtfreter, K., Reisig, M. D., & Pratt, T. C. (2008). Low self-control, routine activities, and fraud victimization. *Criminology, 46*, 189-220. doi:10.1111/j.1745-9125.2008.00101.x

Ipsos. (2020). *Survey on “Scams and fraud experienced by consumers”: Final report*. https://ec.europa.eu/info/sites/info/files/aid\_development\_cooperation\_fundamental\_rights/ensuring\_aid\_effectiveness/documents/survey\_on\_scams\_and\_fraud\_experienced\_by\_consumers\_-\_final\_report.pdf

Jones, H. S., Towse, J. N., & Race, N. (2015). Susceptibility to email fraud: A review of psychological perspectives, data-collection methods, and ethical considerations. *International Journal of Cyber Behavior, Psychology and Learning*, *5*(3), 13–29. https://doi.org/10.4018/IJCBPL.2015070102

Kircanski, K., Notthoff, N., DeLiema, M., Samanez-Larkin, G. R., Shadel, D., Mottola, G., Gotlib, I. H. (2018). Emotional arousal may increase susceptibility to fraud in older and younger adults. *Psychology and Aging*, *33*(2), 325–337. https://doi.org/10.1037/pag0000228

Kühberger, A. & Wiener, C. (2012). Explaining Risk Attitude in Framing Tasks by Regulatory Focus: A Verbal Protocol Analysis and a Simulation Using Fuzzy Logic. Decision Analysis9(4) 359-372.

Klapatch, L., Hanoch, Y., Wood, S., & Hengerer, D. (2022). Consumers’ response to mass

market scam solicitations: A mixed method approach to profiling scams and responses. *Psychology, Crime and Law*. *https://doi.org/10.1080/1068316X.2022.2038599*

Modic, D., & Lea, S. E. G. (2013). Scam compliance and the psychology of persuasion. *SSRN Electronic Journal*, 1–34. https://doi.org/10.2139/ssrn.2364464

Mueller, E. A., Wood, S. A., Hanoch, Y., Huang, Y., & Reed, C. L. (2020). Older and wiser: age differences in susceptibility to investment fraud: the protective role of emotional intelligence. *Journal of Elder Abuse & Neglect, 32*(2), 152-72. https://doi.org/10.1080/08946566.2020.1736704

National Crime Agency. (n.d.) *Fraud*. https://www.nationalcrimeagency.gov.uk/what-wedo/crime-threats/fraud-and-economic-crime

Office of National Statistics. (2017). *Proportion of adults who were victims of fraud in England and Wales 2016-2017, by age*. Statista. https://www.statista.com/statistics/752961/victimsof-fraud-by-age-england-and-wales/

Pennycook G, Cheyne JA, Barr N, Koehler DJ, Fugelsang JA. (2015). On the reception and detection of pseudo-profound bullshit. Judgment Decision Making, 10, 549–563.

Peterson, J. C., Burnes, D. P. R., Caccamise, P. L., Mason, A., Henderson, C. R., Wells, M. T., Berman, J., Cook, A. M., Shukoff, D., Brownell, P., Powell, M., Salamone, A., Pillemer, K. A., & Lachs, M. S. (2014). Financial exploitation of older adults: A population-based prevalence study. *Journal of General Internal Medicine, 29*, 1615-1623. https://doi.org/10.1007/s11606-014-2946-2.

Pressman, S. (2006). On financial frauds and their causes. *American Journal of Economics and Sociology, 57*(4): 405-421. doi:10.1111/j.1536-7150.1998.tb03373.x

PwC. (2018). *PwC's global economic crime survey 2018: UK Findings*. https://www.pwc.co.uk/forensic-services/assets/pwc-global-economic-crime-survey-2018-uk.pdf

Sarasvathy, D., Simon, H., & Lave, L. (1998). Perceiving and managing business risks: Differences between entrepreneurs and bankers. *Journal of Economic Behavior and Organization, 33*, 207-225.

Schoepfer, A. & Piquero, N. L. (2009). Studying the correlates of fraud victimization and reporting. *Journal of Criminal Justice, 37*(2), 209-215

Slovic, P. (2000). *The perception of risk (Risk, society and policy)*. Earthscan.

Sweet, P. (2018). *Global cost of fraud tops 3 trillion*. Accountancy Daily. https://www.accountancydaily.co/global-cost-fraud-tops-ps3-trillion

The United States Department of Justice. (n.d.). *Mass Marketing Fraud*. Retrieved May 2, 2016, from https://www.justice.gov/criminal-fraud/mass-marketing-fraud

Wood, S., & Lichtenberg, P. A. (2016). Financial capacity and financial exploitation of older adults: Research findings, policy recommendations and clinical implications. *Clinical Gerontologist, 11*. doi:10.1080/07317115.2016.1203382

Wood, S., Liu, P.-J., Hanoch, Y., Xi, P. M., & Klapatch, L. (2018). Call to claim your prize: Perceived benefits and risk drive intention to comply in a mass marketing scam. *Journal of Experimental Psychology: Applied, 24*(2), 196-206. http://dx.doi.org/10.1037/xap0000167

Table 1. Sample Demographic Information for Experiment 1 (n = 393).

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Young Adults (*n* = 190) | Older Adults (*n* = 203) |
| Mean Age (in years) | | 37.75 (11.40) | 65.82 (5.62) |
| Gender | Male | 127 (66.84%) | 71 (34.98%) |
|  | Female | 63 (33.16%) | 132 (65.02%) |
|  | Other | 0 (0.00%) | 0 (0.00%) |
| Marital Status | Married | 55 (28.95%) | 108 (53.20%) |
|  | Divorced | 17 (8.95%) | 49 (24.14%) |
|  | Widowed | 1 (0.52%) | 19 (9.36%) |
|  | Single | 117 (61.58%) | 27 (13.30%) |
| Education | Less than GED | 0 (0.00%) | 2 (0.99%) |
|  | High school degree/GED | 57 (30.00%) | 60 (29.56%) |
|  | Associate’s degree | 29 (15.26%) | 33 (16.26%) |
|  | Bachelor’s degree | 87 (45.79%) | 66 (32.51%) |
|  | Master’s degree | 11 (5.79%) | 31 (15.27%) |
|  | Professional degree (MD, JD, etc.) or Ph.D. | 6 (3.16%) | 11 (5.42%) |
| Employment Status | Full-Time | 139 (73.16%) | 43 (21.18%) |
|  | Part-Time | 19 (10.00%) | 50 (24.63%) |
|  | Unemployed | 27 (14.21%) | 110 (54.19%) |
|  | Student | 5 (2.63%) | 0 (0.00%) |
| Income Level | Less than $25k | 56 (29.47%) | 65 (32.02%) |
|  | $25,000-$49,999 | 61 (32.11%) | 81 (39.90%) |
|  | $50,000-$74,999 | 44 (23.16%) | 36 (17.73%) |
|  | $75,000-$124,999 | 24 (12.63%) | 19 (9.36%) |
|  | $125,000-$174,999 | 3 (1.58%) | 2 (0.99%) |
|  | $175k+ | 2 (1.05%) | 0 (0.00%) |
| Ethnicity1 | White | 146 (76.84%) | 181 (89.16%) |
|  | Hispanic/Latine | 4 (2.11%) | 4 (1.97%) |
|  | Black | 13 (6.84%) | 12 (5.91%) |
|  | American Indian | 3 (1.58%) | 0 (0.00%) |
|  | Asian/Pacific Islander | 13 (6.84%) | 3 (1.48%) |
|  | Other | 11 (5.79%) | 3 (1.48%) |

*Note*.1 Some participants identified with multiple ethnicities so these percentages sum to a total greater than 100%.

Table 2. Hierarchical Regression Analyses to Test for Relationships between Predictors and Likelihood of Contact (Experiment 1).

|  |  |  |
| --- | --- | --- |
| Predictor | β | *t* |
| Affect of Letter | -.026 | -.175 |
| Age | -.04 | .703 |
| Gender (Male) | .108 | .691 |
| Education: High School/GED | -2.392 | -2.544\* |
| Education: Associate’s degree | -2.606 | -2.744\*\* |
| Education: Bachelor’s degree | -2.631 | -2.783\*\* |
| Education: Master’s degree | -2.482 | -2.560\* |
| Education: Professional degree | -2.147 | -1.839 |
| Education: PhD/Professional degree | -2.573 | -2.485\* |
| Income: $25,000 - $49,999 | .101 | .533 |
| Income: $50,000 - $74,999 | .113 | .475 |
| Income: $75,000 - $124,999 | -.072 | -.250 |
| Income: $125,000 - $174,999 | .368 | .547 |
| Income: $175k+ | -.219 | -.232 |
| Employment: Part-Time | -.05 | -.224 |
| Employment: Unemployed | .309 | 1.481 |
| Employment: Student | 1.741 | 2.596\* |
| Need For Cognition | -.028 | -.370 |
| Profound Bullshit Receptivity | -.184 | -2.389\* |
| Risk Perception | -.506 | -5.715\*\*\* |
| Benefit Perception | 1.549 | 17.063\*\*\* |

*Note*. \* p < .05, \*\* p < .01, \*\*\* p < .001*.* Please note that although all levels of education are significant predictors of lower intention to contact as compared to the reference group (less than GED), only 2 participants had less than a GED.

Table 3. Qualitative Data Frequencies by Question and by Code (Experiment 1).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | Coded as Present | Coded as Absent |
| Question | | Code | Frequencies | | | |  |
| Risk? | Overall Risk | | | 360 (91.60%) | 33 (8.40%) |
|  | Risk: Scam | | | 188 (47.84%) | 205 (52.16%) |
|  | Risk: Private Info + Identity Theft | | | 230 (58.52%) | 163 (41.48%) |
|  | Risk: Purchase or Money Loss | | | 74 (18.83%) | 319 (81.17%) |
|  | Risk: Junk Mail | | | 34 (8.67%) | 358 (91.33%) |
|  | Risk: Other | | | 58 (14.76%) | 335 (85.24%) |
| Why Risky? | Why: Spelling and Grammar | | | 26 (6.62%) | 367 (93.38%) |
|  | Why: Past Experience | | | 24 (6.11%) | 369 (93.89%) |
|  | Why: Too Good to be True | | | 38 (9.67%) | 355 (90.33%) |
|  | Why: Other | | | 341 (86.77%) | 52 (13.23%) |
| Beneficial? | Overall Benefit | | | 274 (69.72%) | 119 (30.28%) |
|  | Benefit: Legitimate | | | 163 (41.48%) | 230 (58.52%) |
|  | Benefit: Money | | | 188 (47.84%) | 205 (52.16%) |
| Why Beneficial? | Why: Scam\* | | | 116 (29.52%) | 277 (70.48%) |
|  | Why: A Lot of Money | | | 83 (21.12%) | 310 (78.88%) |
|  | Why: Other | | | 214 (54.45%) | 179 (45.55%) |

*Note*. The presence of the code “Why: Scam” indicates the participant mentioning no benefit to be derived from the solicitation because it was a scam. It can be treated as a reverse scored item as compared to the other “Why Beneficial?” codes.

Table 4. Hierarchical Regression Analyses to Test for Relationships between Qualitative Predictors and Risk (Experiment 1).

|  |  |  |  |
| --- | --- | --- | --- |
| Predictor | *R2* | *b* | *t* |
| Best Fit Model | .103. |  |  |
| Why- Spelling and Grammar errors |  | .655 | 1.927 |
| Why – Its Too Good to be True |  | .729 | 2.613\*\* |
| Risk – Private Info or Identity Theft |  | .654 | 3.885\*\*\* |
| Risk – Purchase or Money Loss |  | .457 | 2.126\* |
| Risk – It is a scam |  | .629 | 3.794\*\*\* |

*Note.* \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

Table 5. Hierarchical Regression Analyses to Test for Relationships between Qualitative Predictors and Benefit (Experiment 1).

|  |  |  |  |
| --- | --- | --- | --- |
| Predictor | *R2* | *b* | *t* |
| Best Fit Model | .432. |  |  |
| Benefit -  Legitimacy |  | .856 | 4.767\*\*\* |
| Benefit – Money |  | 1.368 | 7.184\*\*\* |
| Why – Because it is a scam |  | -1.067 | -5.360\*\*\* |
| Why – It is a lot of money |  | 1.677 | 7.118\*\*\* |

*Note.* \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

Table 6. Hierarchical Regression Analyses to Test for Relationships between Qualitative and Quantitative Predictors and Likelihood of Contact (Experiment 1).

|  |  |  |  |
| --- | --- | --- | --- |
| Predictor | *R2* | β | *t* |
| Best Fit Model | .707 |  |  |
| Risk Rating |  | -.572 | -6.777 |
| Benefit Rating |  | 1.336 | 13.930 |
| Education: Less than GED |  | 2.616 | 2.860\*\* |
| Education: High School/GED |  | .111 | .510 |
| Education: Bachelor’s degree |  | -.165 | -.784 |
| Education: Master’s degree |  | .127 | .463 |
| Education: Professional degree/PhD |  | .008 | .022 |
| Employment: Unemployed |  | .358 | 2.206\* |
| Employment: Part-Time |  | -.079 | -.409 |
| Employment: Student |  | 1.611 | 2.491\* |
| Profound Bullshit Receptivity |  | -.204 | -2.821\*\* |
| Why\_Spelling and Grammar |  | -.607 | -2.236\* |
| Bene\_Money |  | .451 | 2.741\*\* |

*Note.* \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

*Note.*Less than GED education level does appear predictive of contact likelihood in the final model, however, there were only 2 participants in Experiment 1 that had Less than GED level education, so the point estimates used for this hierarchical model are not necessarily stable.

Table 7. Sample Demographic Information for Experiment 2 (n = 299).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | Younger Adults (*n = 289)* | Older Adults (*n =10*) |
| Mean Age |  | | 33.82 (9.19) years | 66.6(4.53) years |
| Gender | Male | | 164 (56.75%) | 7 (70.00%) |
|  | Female | | 125 (43.25%) | 3 (30.00%) |
|  | Other | | 0 (0.00%) | 0 (0.00%) |
| Marital Status | Married | | 90 (31.14%) | 4 (40.00%) |
|  | Divorced | | 17 (5.88%) | 1 (10.00%) |
|  | Widowed | | 1 (0.35 %) | 1 (10.00 %) |
|  | Single | | 181 (62.63%) | 4 (40.00%) |
| Education | Less than GED | | 1 (0.35%) | 0 (0.00%) |
|  | High school degree/GED | | 86 (29.76%) | 4 (27.84%) |
|  | Associate’s degree | | 57 (29.76%) | 1(16.15%) |
|  | Bachelor’s degree | | 120 (41.52%) | 3 (43.64%) |
|  | Master’s degree | | 20 (6.92%) | 0 (0.00%) |
|  | Professional degree (MD, JD, etc.) | | 3 (1.04 %) | 1 (10.00%) |
|  | PhD | | 2 (0.69%) | 1 (10.00%) |
| Employment Status | Full-Time | 187 (64.71%) | | 3 (30.00%) |
|  | Part-Time | 43 (14.88%) | | 5 (50.00%) |
|  | Unemployed | 41 (14.19%) | | 2 (20.00%) |
|  | Student | 18 (6.23%) | | 0 (0.00%) |
| Income Level | Less than $25k | | 96 (33.22%) | 2 (20.00%) |
|  | $25,000-$49,999 | | 107 (37.02%) | 4 (40.00%) |
|  | $50,000-$74,999 | | 50 (17.30%) | 3 (30.00%) |
|  | $75,000-$124,999 | | 28 (9.69%) | 0 (0.00%) |
|  | $125,000-$174,999 | | 6 (2.08%) | 1 (10.00%) |
|  | $175k+ | | 2 (0.69%) | 0 (0.00%) |
| Ethnicity3 | White | | 206 (71.28%) | 9 (90.00%) |
|  | Hispanic/Latine | | 25 (8.36%) | 1 (10.00%) |
|  | Black | | 25 (8.36%) | 0(0.00%) |
|  | American Indian | | 4 (1.34%) | 0 (0.00%) |
|  | Asian | | 28 (9.34%) | 0 (0.00%) |
|  | Other | | 1 (0.00%) | 0 (0.00%) |

*Note* Some participants identified with multiple ethnicities so these percentages sum to a total greater than 100%.

Table 8. Hierarchical Regression Analyses to Test for Relationships between Predictors and Likelihood of Contact (Experiment 2).

|  |  |  |  |
| --- | --- | --- | --- |
| Predictor | *R2* | β | *t* |
| Best Fit Model | .511 |  |  |
| Affect of Letter (“hot”/ “cold”) |  | .130 | .736 |
| Reward Magnitude |  | .053 | .313 |
| Presence of Activation Fee |  | -.197 | -1.134 |
| Education: High School/GED |  | .796 | .541 |
| Education: Associate’s degree |  | 1.231 | .835 |
| Education: Bachelor’s degree |  | .669 | .455 |
| Education: Master’s degree |  | .771 | .511 |
| Education: Professional degree |  | .257 | .156 |
| Education: PhD |  | 1.190 | .696 |
| Income: $25,000 - $49,999 |  | -.069 | -.313 |
| Income: $50,000 - $74,999 |  | -.086 | -.305 |
| Income: $75,000 - $124,999 |  | -.252 | -.755 |
| Income: $125,000 - $174,999 |  | -.490 | -.835 |
| Income: $175k+ |  | -.174 | -.156 |
| Employment: Full-time |  | .266 | .960 |
| Employment: Part-Time |  | .161 | .511 |
| Employment: Student |  | .460 | 1.049 |
| Age |  | .000 | .067 |
| Gender (Female) |  | -.111 | -.630 |
| Risk Perception |  | -.766 | -7.627\*\*\* |
| Benefit Perception |  | .923 | 9.374\*\*\* |

*Note.* \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

Table 9. Qualitative Data Frequencies by Question and by Code (Experiment 2).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | Coded as Present | Coded as Absent |
| Question | | Code | Frequencies | | | |  |
| Risk? | Overall Risk | | | 287 (96.31%) | 11 (3.69%) |
|  | Risk: Scam | | | 165 (55.37%) | 133 (44.63%) |
|  | Risk: Private Info + Identity Theft | | | 164 (55.03%) | 134 (44.97%) |
|  | Risk: Purchase or Money Loss | | | 100 (33.56%) | 198 (66.44%) |
|  | Risk: Junk Mail | | | 17 (5.7%) | 281 (94.3%) |
|  | Risk: Other | | | 42 (14.43%) | 255 (85.57%) |
| Why Risky? | Why: Spelling and Grammar | | | 13 (4.36%) | 285 (95.64%) |
|  | Why: Past Experience | | | 13 (4.36%) | 285 (95.64%) |
|  | Why: Too Good to be True | | | 26 (8.72%) | 272 (91.28%) |
|  | Why: Other | | | 211 (70.81%) | 87 (29.19%) |
|  | Why: Self-Efficacy | | | 31 (10.4%) | 267 (896%) |
|  | Why: Elements of the Letter | | | 58 (19.46%) | 240 (80.54%) |
|  | Why: Did not enter | | | 22 (7.38%) | 276 (92.62%) |
| Beneficial? | Overall Benefit | | | 199 (66.78%) | 99 (33.22%) |
|  | Benefit: Legitimate | | | 135 (45.3%) | 163 (54.7%) |
|  | Benefit: Money | | | 145 (48.66%) | 153 (51.34%) |
| Why Beneficial? | Why: Scam\* | | | 106 (35.57%) | 192 (64.43%) |
|  | Why: A Lot of Money | | | 72 (24.16%) | 226 (75.84%) |
|  | Why: Other | | | 134 (44.97%) | 165 (55.03%) |

*Note*. \*The presence of the code “Why: Scam” indicates the participant mentioning there not being benefit to be derived from the solicitation because it was a scam. It can be treated as a reverse scored item as compared to the other “Why Beneficial?” codes.

Table 10. Hierarchical Regression Analyses to Test for Relationships between Qualitative Predictors and Risk (Experiment 2).

|  |  |  |  |
| --- | --- | --- | --- |
| Predictor | *R2* | *b* | *t* |
| Best Fit Model | .208. |  |  |
| Emotionality (Hot/Cold) |  | -.411 | -2.579\* |
| Activation Fee |  | .383 | 2.289\* |
| Marital Status |  | .385 | 3.103\*\* |
| Why\_Self-Efficacy |  | -1.671 | -6.288\*\*\* |
| Why\_ Elements of the Letter |  | .430 | 2.069\* |

*Note.* \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

Table 11. Hierarchical Regression Analyses to Test for Relationships between Qualitative Predictors and Benefit (Experiment 2).

|  |  |  |  |
| --- | --- | --- | --- |
| Predictor | *R2* | *b* | *t* |
| Best Fit Model | .392. |  |  |
| Activation fee |  | -.537 | -2.599\*\* |
| Age |  | -.029 | -3.058\*\* |
| Why\_Self-Efficacy |  | 1.156 | 2.923\*\* |
| Why\_Because It is a scam |  | -1.476 | -6.225\*\*\* |
| Why\_ Because it is a lot of money |  | 1.608 | 6.159\*\*\* |
| Self-efficacy\*Why\_Scam |  | -1.479 | -1.975\* |

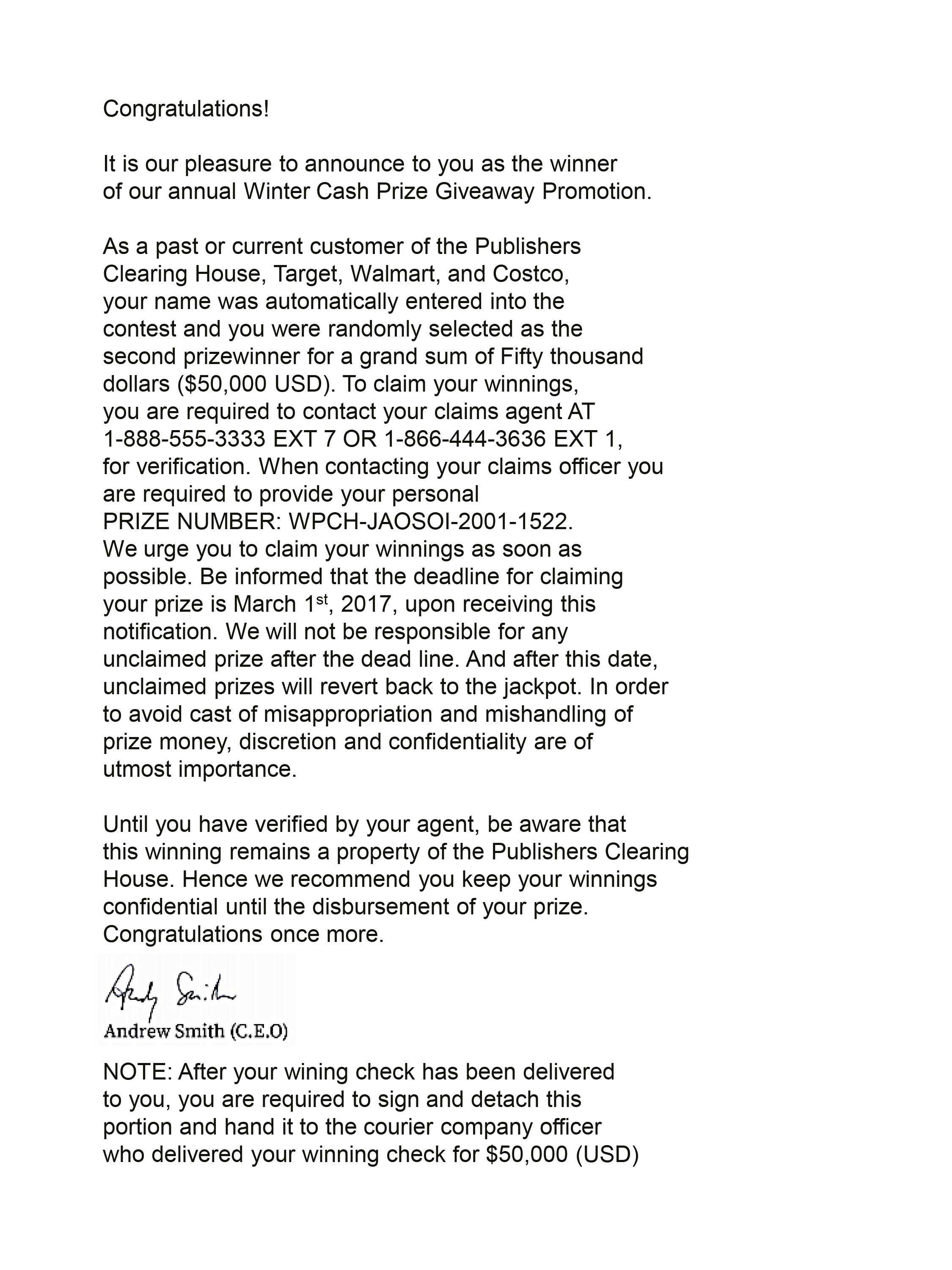
*Note.* \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

Table 12. Hierarchical Regression Analyses to Test for Relationships between Qual and Quant Predictors and Likelihood of Contact (Experiment 2).

|  |  |  |  |
| --- | --- | --- | --- |
| Predictor | *R2* | β | *t* |
| Best Fit Model | .541 |  |  |
| Risk Rating |  | -.663 | -6.744\*\*\* |
| Benefit Rating |  | .826 | 8.176\*\*\* |
| Self-Efficacy |  | .766 | 2.673\*\* |
| Why? - Because it is a scam |  | -.559 | -2.875\*\* |

*Note.* \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

**Appendix A**





**Appendix B**

(1) For this experiment, you received an offer letter that was either genuine or a scam. Which of the two do you think you have received?

* Scam (1)
* Genuine (2)

(2) How confident are you in your answer?

* Very Low Confidence (1)
* (2)
* (3)
* (4)
* (5)
* (6)
* Very High Confidence (7)

(3) Have you ever received a letter similar to the one above?

* Yes (1)
* No (2)

(4) Did you respond to the letter that you received?

* Yes (1)
* No (2)
  + - 1. In your opinion, what could be the risks to responding to this letter?
      2. Why do you perceive the risk in responding to this letter to be low or high?
      3. In your opinion, what could be the benefits of responding to this letter?
      4. Why do you perceive the benefit in responding to be low or high?

**Appendix C**

Note: The categories are **NOT** mutually exclusive.

* Risk Rating Codes
* Overall Risk
* There is some mention of some sort of risk regardless of any specific risk. Basically, if any of the next categories applied (see Risk: \_\_\_)
* Risk: Scam
* There is specific mention of the word "scam" or "fraud"
* Risk: Private Info/ID theft
* There is some mention of identity theft or loss of private information/data
* Risk: Purchase/Money loss
* There is some mention of being forced to make a purchase or mention of loss of money specifically
* NOT sales pitch
* Risk: Junk Mail
* Any mention of junk mail or spam.
* Risk: Other
* Any other risk that wasn't covered by "scam," "private info/ID theft", "purchase/money loss", or "junk mail"
* Why the Risk Rating above Codes
* Why: Self-efficacy
* Any mention that they trust their ability to avoid risks
* Why: Spelling/Grammar
* Any mention about the spelling or grammar would apply.
* Typo would apply
* Why: Other elements of the letter
* Any mention of urgent deadline
* Any mention of generic authority (Target, Costco, etc.)
* Any mention of confidentiality
* Any mention of other elements of the letter besides spelling, typos, & grammar
* Why: Past experience
* Whether they mentioned experience with this sort of letter in the past.
* Includes previous experience with legitimate sweepstakes.
* Why: Too Good to be True
* Any mention that the offer was "too good to be true" or something along those lines.
* Why: Did not enter
* Any mention that they did not or do not recall entering into a contest
* Why: Other
* If they wrote a reason why that doesn't apply to the previous categories
* Benefit Rating Codes
* Overall Benefit
* There is some mention of some sort of benefit regardless of any specific benefit. Basically if any of the next categories applied (see Benefit: \_\_\_)
* Benefit: Legitimate
* There is some mention that this offer could be legitimate
* Mention that they may be a winner (but nothing about the prize amount)
* Benefit: Money
* There is specific mention of the prize amount or the word "money" or "finance/financial"
* There were questions about whether the word "prize" should be counted in this category or separately
* Benefit: Other
* Any other benefits not covered by the above Benefit: \_\_\_ categories.
* Why the benefit Rating above Codes
* Why: Scam
* Any mention that there are few or no benefits because it's a scam or likely to be a scam.
* Why: A lot of money
* Whether they mentioned that the prize amount was substantial or would have a substantial impact on their finances.
* Why: Other
* If they wrote a reason why that doesn't apply to the previous categories.

**Appendix D**

Risk and Why Risky Sample Quotes: Experiment 2

|  |  |  |
| --- | --- | --- |
| Question being Responded to | Code | Sample Quotes |
| **Risky?** | Because it’s a scam | *Scammers trying to solicit information from me.*  *The risk would be that this is a ploy to get $100 from me.*  *Sounds like a scam you would see on the internet.*  *Seems like a scam because of the $100 fee.* |
| Loss of private information/identity theft | *I feel it would open my personal information up for sale to other phishing companies. I could have a breech(sic) of personal data at worse, or at least have my info sold to several companies wanting to sell me stuff.*  *I’m sure to lose 100 dollars. I’d probably have my identity stolen.*  *I think the risk will be in identity theft. They will required(sic) you to give personal information.* |
| Required to make a purchase/money loss | *They get you into paying the activation fee and you never receive the prize (obviously).*  *That you will lose $100 you give to this scam if you go that far…*  *I would say my credit history could be compromised or they could steal everything out of my banking account.*  *It could possibly be a scam, and money/identity could be lost in the process.* |
| More junk mail | *I think it is just a marketing ploy, it looks more like a solicitation that (sic) an actual award letter.*  *Magazine subscriptions.*  *My personal information would be going to the company and could be sold for profit, etc. and I could be spammed with mail or email.*  *Spam.* |
| Other Reasons | *Wasted time and effort… Agreeing to the “fine print” might create legal problems.*  *Feeling stupid for falling for it!*  *Losing my identity or possibly going to jail.*  *You risk wasting your time since you won’t win anything.* |
| **Why Risky?** | Spelling and Grammar Errors | *There's at least one glaring spelling mistake on the flier, which does not exactly fill me with confidence.*  *The risk is high because there are typos and grammatical errors in the flyer.*  *The letter is poorly written and might have been written by someone who is not American. This could be a phishing tool being used by foreign criminals. It is clear that the letter and offer are fraudulent and I consider that to be sufficient to assume high risk.* |
| Past Experience with Scams | *The publishers clearing house doesn't require you to pay upfront when you win a prize so I see it as being very risky.*  *It looks like any common scam which I have seen….*  *It sounds like scams I have encountered before.* |
| Too good to be true | *If an offer seems too good to be true, it probably is… People don't just give money away. If they are asking for money you won't see any.*  *Because offers too good to be true likely are.*  *It sounds too good to be true, meaning it likely is.*  *Because nobody simply offers $500,000 to random people without it being some sort of scam.* |
| Self-Efficacy/ Confidence | *Low, I would investigate the phone number first and see if it is legit.*  *It is low for me, because I won't be sending them any personal checks or anything…*  *I think it's low because they don't have any information unless you give it to them. If you call and the letter isn't real, it's just a waste of time and that's all.*  *I think it is low risk because Im just making contact.* |
| Elements of the Letter (internal consistency/presence of activation fee) | *It doesn't make sense that I should have to pay money to receive. Looks like a scam.*  *Because it's clearly fraudulent, no 'contest' in the world asks you to deposit money before your receive your winnings…*  *I don't see why Costco, Target, Walmart and Clearing House would all be involved in this when three of the four are competitors.*  *Because no legitimate company would ask for money to claim a prize.* |
| Can’t win if you don’t enter | *If I didn't enter into anything willingly, chances are I didn't actually win anything.*  *I perceive it to be high since I don't remember entering a contest like this when I was shopping.*  *If I didn't enter anything it's just suspicious*  *I never win stuff, and I particularly don't win sweepstakes that I never entered.* |

**Appendix E**

Beneficial and Why Beneficial Sample Quotes: Experiment 2

|  |  |  |
| --- | --- | --- |
| Question being Responded to | Code | Sample Quotes |
| **Beneficial?** | Legitimate Offer | *Perhaps the company is telling you the truth and you do actually win this money.*  *It could be legitimate and it does look fairly legitimate so there is a decent possibility of winning $50,000.*  *The prize is legitimate and I can claim the money for myself.*  *The benefits could be that the letter is genuine and I will receive $500,000 dollars.* |
| Winning Prize Money | *The benefits would be being $500,000 richer!*  *I could get the 50,000 that is the prize.*  *Well the most obvious benefit is $50,000, actually that's the only potential benefit I can think of.*  *The benefits are becoming rich.* |
| Other Reasons | *You could learn a valuable life lesson.*  *The only benefits I could see to answering this is helping to catch people who are trying to scam others.*  *To get them to take you off their mailing/contact list* |
| **Why Beneficial?** | Scam, no benefit | *I don't think the benefit is high because it seems likely to be a scam with no benefit.*  *Benefits are very low since its a scam letter.*  *The benefit is too low because there is nothing to be gained from responding to a scam artist.* |
| A whole lot of money | *The benefit of responding is high because there is no scam I can see, and there is a high probability of collecting 50000 dollars. Who doesn't want to collect that money. I could do a lot with it.*  *The amount of money mentioned is relatively high compared to the money I have/make.*  *It's a sizable sum of money that I can spend on whatever I want. It's almost a year wage for an average American.* |

1. Analyses were also run with a three-level factor for Age Group, with younger adults (18-39), Middle Aged Adults (40-59), and Older Adults (60+). There was no change in the results for the three outcomes of interest for the quantitative analyses: contact likelihood, risk rating, and benefit rating. [↑](#footnote-ref-1)