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RESEARCH ARTICLE

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Positive framing when assessing the personal resources to manage one's finances increases consumers' retirement self-efficacy and improves retirement goal clarity

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Abstract

People are increasingly expected to take an active role in preparing for a financially secure future, and thus face added personal financial responsibility. Unfortunately, many consumers lack the perceived ability to engage effectively in retirement planning (i.e., retirement self-efficacy) and accordingly fail to envision their financial future and set appropriate goals. However, little is known about how to improve consumers' retirement self-efficacy and when and why potential policy interventions will be more or less effective. In the current paper, we address this shortcoming of prior literature. Through a series of experiments, we show that when consumers assess personal resources to achieve a financially secure future, positive framing focusing on strengths instead of weaknesses is associated with higher retirement self-efficacy through an increased internal locus of control. Higher self-efficacy, in turn, leads to improved retirement goal clarity, with the improvement being more pronounced for individuals having a lower consideration of future consequences. In a follow-up study three months after the initial experimental intervention, we find that retirement goal clarity is positively associated with consumers' level of actual retirement planning activity. Finally, we replicate our findings using an advertisement as an alternative, marketing-relevant, manipulation.

KEYWORDS

consideration of future consequences, locus of control, positive framing, retirement goal clarity, retirement self-efficacy

1 | INTRODUCTION

As pension schemes around the world are changing from defined benefit to defined contribution systems and Social Security pension schemes are increasingly at risk of being underfunded, individuals are subject to growing pressure to be actively involved in preparing for and managing a financially secure future themselves (van Rooij et al., 2011). Indeed, today's consumers are expected to make a myriad of complex decisions and provisions related to retirement savings (Eberhardt et al., 2021). However, only a few individuals actually are—or believe they are—capable of making competent financial decisions with long-term wealth implications (Peeters et al., 2018). Hence, it is important to establish how to support consumers in proactive retirement planning and improve their belief in their capability to engage in this task (e.g., Hentzen et al., 2021).

Previous studies indicate that consumers put maximum cognitive effort into a task when they perceive to have the required capabilities (i.e., self-efficacy) to carry out the task (Hu et al., 2007). Self-efficacy thus taps into consumers' psychological state of "I believe that I can." (van Esch et al., 2021, p. 1083). Kuanr et al. (2020) demonstrate that self-efficacy has an important role in mediating the effect of consumers' beliefs on their behaviors and recent work suggests that the subjective perception of being able to competently manage one's personal finances is as crucial for achieving positive financial outcomes as actually having the financial knowledge required for these decisions (Lind et al., 2020). In particular, individuals with higher financial self-efficacy are more long-term-oriented (Chen et al., 2001), act more responsibly regarding their finances (Hadar et al., 2013), use more official financial services contributing to better financial inclusion (Mindra et al., 2017), and obtain more positive financial outcomes (Hoffmann & McNair, 2019). In this regard, retirement self-efficacy is one of the core elements ensuring sufficient engagement of consumers with retirement planning and preparation (Hentzen et al., 2021; Nansubuga, 2018). However, there is scant research on how to increase consumers' retirement self-efficacy and whether it leads to subsequent improvements in their financial planning behavior (Hoffmann & Plotkina, 2021).

Prior research highlights that in addition to possessing sufficient retirement self-efficacy (Earl et al., 2015), consumers need a certain level of goal clarity to effectively prepare for and manage their retirement (Stawski et al., 2007). Goals play an important role in structuring long-term planning activities (Beach, 1998), and retirement goal clarity "reflect[s] the act of thinking about, discussing, or setting goals for the future, particularly in relation to retirement quality of life" (Hershey et al., 2007, p. 31). Surprisingly, research is so far lacking on how to stimulate the adoption of clear retirement goals and the role of retirement self-efficacy in this process.

However, previous work suggests that the assessment of one's personal resources (i.e., enactive mastery) affects one's perceived ability to perform a certain task (i.e., self-efficacy) (Gist & Mitchell, 1992). Moreover, prior studies suggest that consumers' self-efficacy can be affected by the framing of information (Choe et al., 2013; Lindenmeier, 2008), and that a relationship exists between positive versus negative framing, self-efficacy, and goal clarity (Bandura and Locke, 2003). Indeed, goal clarity is a crucial variable in a retirement planning context, as it is related to people's self-assessment (Guido et al., 2014), planning for retirement and making pension contributions (Stawski et al., 2007; Tomar et al., 2021), and estimating one's needs in terms of required retirement savings (Zhu & Chou, 2018). Furthermore, psychological traits—such as perceived control over the outcomes of one's actions and the consideration of future consequences—are essential to explain how individuals develop financial self-efficacy and whether it ultimately affects their financial behavior (Fernandes et al., 2014).

Against this theoretical backdrop, we aim to establish (i) the impact on retirement self-efficacy of positive versus negative framing with regard to assessing one's personal resources to achieve a financially secure future; (ii) whether internal locus of control plays a mediating role regarding the effect of such framing on changes in retirement self-efficacy; (iii) whether increased retirement self-efficacy improves consumers' retirement goal clarity; (iv) whether the extent to which individuals consider the future consequences of their behavior plays a moderating role regarding the effect of retirement self-efficacy on retirement goal clarity; and (v) whether retirement goal clarity is positively associated with actual retirement planning activity.

To address these issues, we perform two studies among different samples of consumers. Results from Study 1's experiment show that when assessing their personal resources to achieve a financially secure future, participants' adoption of a positive (vs. negative) frame by focusing on their strengths (vs. weaknesses) is associated with higher (vs. lower) internal locus of control, which in turn increases (vs. decreases) their retirement self-efficacy. Results also show that higher retirement self-efficacy translates into improved retirement goal clarity—an effect that is more pronounced for individuals characterized by a low level of consideration of future consequences. Furthermore, we recontacted participants of Study 1 after three months and found that their retirement goal clarity is positively related to their level of actual retirement planning activity in the three months following the initial experiment, such as information search related to and discussion of financial planning, retirement, and post-retirement work and activities. Results from Study 2's experiment confirm the main findings of Study 1 using an alternative manipulation with external validity in a marketing context (i.e., an advertisement) while also controlling for differences in participants' financial literacy as well as social desirability bias.

Our paper makes both theoretical and practical contributions to the literature. From a theoretical stance, despite the ongoing discussion of the importance of retirement self-efficacy (e.g., Hoffmann & Plotkina, 2020), prior studies have not assessed potential interventions to improve consumers' retirement self-efficacy and thereby stimulate their retirement goal clarity. In this regard, we adapt the self-efficacy–performance model of Gist and Mitchell (1992) to the retirement management context and add retirement goal clarity as an important outcome variable resulting from increased levels of retirement self-efficacy. We also examine consumers' internal locus of control as a mediator and their consideration of future consequences as a moderator variable, thereby enhancing the understanding of the underlying process of our experimental manipulation's effect. In doing so, we address an important gap in the literature and respond to the call for research identifying the drivers of financial self-efficacy (Farrell et al., 2016). Overall, in adding to the financial self-efficacy literature (Lown, 2011), we show that perceived personal resources to manage one's finances are crucial to making financial behavior more goal-oriented and to stimulating consumers to set clear retirement objectives. Finally, we address the impact of retirement goal clarity on the actual financial behavior of consumers by recontacting them after three months to complete a follow-up questionnaire.

From a practical perspective, we provide guidelines for policymakers' use in refining their campaigns to empower consumers in their financial decision-making and stimulate their engagement in retirement preparation (e.g., Consumer Financial Protection Bureau, 2013). Our results suggest that letting individuals assess their personal resources to manage their personal finances and when doing so, focusing on their strengths instead of their weaknesses, increases their retirement self-efficacy by giving them a stronger internal locus of control. Indeed, in light of individuals' increasing self-responsibility for managing their retirement (van Rooij et al., 2011), providing assistance to consumers in setting clear goals to help their retirement planning is crucial. In tune with positive psychology literature, which asserts the importance of focusing on people's strengths and successes (Lopez et al., 2003), our main policy suggestion is thus to apply positive framing and focus on people's available personal resources when trying to empower consumers.

2 | CONCEPTUAL MODEL AND HYPOTHESES DEVELOPMENT

We embed our conceptual model (Figure 1) in prior work on the antecedents and consequences of self-efficacy, which postulates that perceived personal resources (i.e., enactive mastery) affect an individual's perceived ability to perform a certain task (i.e., self-efficacy) (Bandura, 1997; Gist & Mitchell, 1992). The effect of such enactive mastery on self-efficacy can be mediated by an individual's attributional analysis of why a particular performance occurred. Finally, increased levels of self-efficacy are expected to lead to positive consumer behavior.

Applying and extending this general theory to the specific context of our current research, we examine how positive versus negative framing of an individual's assessment of personal resources to achieve a financially secure future (i.e., thinking about one's strengths vs. weaknesses) is associated with their retirement self-efficacy by increasing one's internal locus of control. In terms of positive behavior resulting from increased retirement self-efficacy, we examine the extent to which consumers set clear goals for retirement. Furthermore, we study how the latter relationship is moderated by the individual's level of consideration of future consequences. Finally, we study how consumers' retirement goal clarity is related to their actual retirement planning activity.

We focus on internal locus of control when assessing the underlying process of the experimental manipulation's effect on retirement self-efficacy because—consistent with the attributional analysis component in Gist and Mitchell's (1992) model—this trait explains whether life events are perceived as dependent on the actions of oneself and are thus internalized to drive further actions or not (Rotter, 1966). Having an internal locus of control is especially relevant in a retirement setting given its positive relationship with consumers' savings behavior (Cobb-Clark et al., 2016) and responsible financial behavior (Hoffmann & Risse, 2020). In terms of positive consumer behavior, we focus on retirement goal clarity, as previous studies indicate that goal clarity can improve consumers' retirement savings performance (Hershey et al., 2003; Petkoska & Earl, 2009; Stawski et al., 2007). To validate the importance of retirement goal clarity as an outcome variable, we incorporate its link with consumers' actual retirement planning activity as an ultimate outcome (Stawski et al., 2007). Finally, to identify for which individuals retirement self-efficacy is especially beneficial in terms of stimulating retirement goal clarity, we examine the moderating role of the consideration of future consequences. In doing so, we build on prior work that stipulates that the consideration of future consequences is an important psychological trait that helps explain consumers' future-oriented behavior (Strathman et al., 1994). Examining the moderating role of consumers' consideration of future consequences is particularly relevant in a retirement context given that Joireman et al. (2005) demonstrate that a higher level of consideration of future consequences goes hand in hand with more fiscal responsibility, while Joireman et al. (2010) show how it can mitigate the effect of consumers' compulsive buying tendencies on their credit card debt. Next, we explain the hypothesized relationships in detail.

2.1. The effect of personal resources framing on retirement self-efficacy

The four principal sources of self-efficacy are enactive mastery experiences, vicarious experiences, social persuasion, and physiological/affective states (e.g., Bandura, 1986). The belief in one's personal

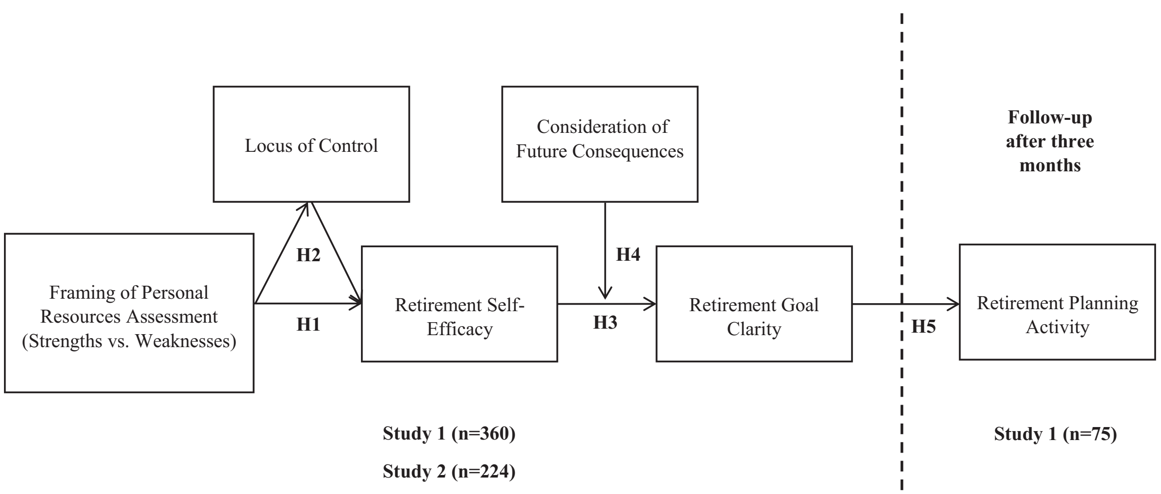

FIGURE 1 Conceptual model of Study 1 and Study 2

resources, or one's abilities to accomplish certain tasks based on the results of one's prior behaviors, relates to the concept of "enactive mastery." Prior research identifies enactive mastery as the main source of self-efficacy (e.g., Bandura, 1986). Indeed, enactive mastery or actual personal experience is suggested as the most effective predictor of self-efficacy in consumer behavior (Garlin & McGuiggan, 2002). We expect that also in the context of retirement-related decisions, consumers' actual behavior and experience with finances have the biggest potential to improve their beliefs in the capacity to successfully manage their retirement, and in this paper we therefore focus on this particular source of self-efficacy.[1]

In particular, lived experiences allow consumers to assess their competencies and hence resources and constraints with respect to accomplishing similar tasks in the future (Gist & Mitchell, 1992). For instance, the most successful college students build their confidence (i.e., self-efficacy) on the basis of their successful experiences (i.e., enactive mastery), allowing them to identify and capitalize on their personal strengths (Bowers & Lopez, 2010). It is therefore important to identify one's strengths and reflect on how these personal characteristics can help one succeed in further endeavors. Indeed, acknowledged character strengths predict self-efficacy and expectations of positive subjective experiences (Weber et al., 2013). Further, identifying and reporting one's character strengths predict the ability to tolerate and bounce back from negative experiences, such as failure, loss, illness, or stress (Martínez-Martí & Ruch, 2017). Indeed, self-enhancement (vs. self-debilitation) is directly related to one's self-efficacy and can be induced by the valence of the feedback or, to a larger extent, self-assessment (Bandura & Locke, 2003).

Previous research in organizational studies and team management shows that strengths inducement and positive thinking are impactful in improving employee and team effectiveness (Clifton & Harter, 2003). Indeed, while prior psychological and management theories suggested that human weaknesses should be identified and pinpointed so that they can be improved, modern approaches insist on the effectiveness of positive psychology (Seligman & Csikszentmihalyi, 2014). Furthermore, in contrast to negative events, Aldwin et al. (1996) have shown that positive events can trigger perceived psychological growth. The key of positive psychology, from a conceptual and methodological perspective, is a focus on strengths and self-efficacy instead of weaknesses (Pajares, 2009), and it has been applied in the financial context (Asebedo et al., 2020).

We expect that the mechanism of improving one's self-efficacy by identifying one's strengths also applies to the retirement management context. This reasoning is supported by prior research suggesting that pre-retirement strength-based interventions can improve consumers' belief in their ability to successfully negotiate the transition to retirement and find purposeful and affirmative life engagement upon entering this new chapter in their life (see Peila-Shuster, 2011). Prior studies suggest that such a strength focus can be effectively induced using positive framing (Tversky & Kahneman, 1986). Building on this previous research, we therefore expect that when individuals are asked to assess their personal resources to achieve a financially secure future, a positive framing requesting them to assess their strengths will stimulate their retirement self-efficacy, while a negative framing requesting them to assess their weaknesses will detract from their retirement self-efficacy. We hypothesize:

H1: *Asking consumers to adopt a positive frame focused on their strengths when assessing their personal resources to achieve a financially secure future is associated with a higher retirement self-efficacy than asking them to adopt a negative frame focused on their weaknesses*.

2.2. The mediating role of locus of control

Locus of control refers to people's beliefs about the causes of rewards and punishments (Rotter, 1966). Individuals with an internal locus of control believe that life outcomes depend on their own efforts and choices as opposed to luck, others, or further external factors (Hoffmann & Risse, 2020). While locus of control and self-efficacy both relate to the self-evaluation construct (Judge et al., 2003), self-efficacy relates to the perceived ability to perform certain tasks and locus of control relates to the belief that performance depends on one's own behavior (Rotter, 1966).

Conceivably, an internal locus of control assigns one's successes or strengths to one's individual achievements, thus building beliefs of self-efficacy, which reflects one's perceived ability to perform. Indeed, prior research shows that an internal locus of control helps people become conscious about themselves and their abilities. In particular, personal resources, once recognized, can shape individuals' self-efficacy beliefs (Judge et al., 2003).

There is substantial research that suggests a relationship between an individual's self-efficacy and his or her locus of control (e.g., Landine & Stewart, 1998). Indeed, Phillips and Gully (1997) and Judge et al. (2002) empirically demonstrate that locus of control and self-efficacy are related and, more specifically, provide evidence that an internal locus of control positively predicts self-efficacy levels. This relationship holds across multiple contexts. For instance, an internal locus of control can improve health-related self-efficacy (Waller & Bates, 1992), job-related self-efficacy (Strauser et al., 2002), and course-level academic self-efficacy (Au, 2015).

Prior literature shows the relevance of an internal locus of control for financial management. In particular, locus of control helps explain savings behavior (Cobb-Clark et al., 2016) and retirement contributions (Piotrowska, 2019). Building on these previous findings,

[1]Our research focus is also informed by prior research which gives us reason to believe that the other potential sources of self-efficacy—that is, vicarious experiences, social persuasion, and physiological/affective states—will be less helpful to improve retirement self-efficacy. In particular, relying on vicarious experiences implies using the observation of someone else's path to a successful retirement as the basis for developing one's own retirement self-efficacy. However, due to the significant changes across generations in terms of their values and economic situation, the examples of previous generations are generally not effective in the retirement context (Fishman, 2016). The effect of persuasive communication on financial behavior has been previously studied and typically only has a short-term effect on behavior (Fernandes et al., 2014). Finally, the potential effect of physiological/affective states in driving self-efficacy is mostly related to the stress and cognitive processes related to shifting into retirement (Bekhet and Zauszniewski, 2012).

we expect that consumers' locus of control will explain the positive relationship between the identification of one's personal strengths in the experimental manipulation (i.e., enactive mastery) and the realization that these strengths represent personal resources that foster success in certain tasks (i.e., self-efficacy). In particular, we expect that through assessing their strengths in terms of personal resources needed to achieve a financially secure future, individuals will be empowered to think that life outcomes are a result of their own actions rather than external factors, which in turn strengthens their retirement self-efficacy. Hence, we hypothesize:

H2: *The effect of personal resources framing (i.e., positive vs. negative) on consumers' retirement self-efficacy is positively mediated by a stronger internal locus of control.*

2.3. The effect of retirement self-efficacy on retirement goal clarity

Prior work posits that self-efficacy positively influences individuals' goal levels (Gist & Mitchell, 1992), and finds that confidence in one's capacity to achieve specific goals leads to setting appropriate goals (Webb & Sheeran, 2008), helping increase task performance (Locke & Latham, 1990). Clear goals contribute considerably to consumers' savings (Ülkümen & Cheema, 2011) and investment behaviors (Aspara et al., 2015). Setting clear goals is also of paramount importance to improve retirement management, with prior literature highlighting clear goals as a key driver of retirement savings contributions (Stawski et al., 2007) as well as retirement planning behavior (Neukam, 2002).

Individuals' self-efficacy is closely related to their goal clarity (Gist & Mitchell, 1992), as self-efficacy plays an important part in one's self-regulation process, including determining goals and acting to achieve those goals (Kanfer & Ackerman, 1989; Locke & Latham, 1990). Indeed, prior research finds that self-efficacy influences both goal level and goal commitment (Locke et al., 1984). In terms of the relationship between retirement self-efficacy and retirement goal clarity, prior work identifies financial self-efficacy as a core construct that explains financial attitudes (Farrell et al., 2016), behavior (Danes & Haberman, 2007), and outcomes (Hoffmann & McNair, 2019). Importantly, financial self-efficacy determines whether individuals apply their knowledge and resources in their financial behavior or not (see, e.g., Skagerlund et al., 2018).

Indeed, previous work finds that the more strongly individuals believe in their capacity to manage their finances, the more responsible their financial behavior (Hadar et al., 2013). Generally, financial self-efficacy predicts consumers' financial discipline and orientation toward setting long-term financial goals (Chen et al., 2001). Specifically, Rickwood et al. (2017) find that retirement self-efficacy positively influences consumers' goal clarity associated with using the professional services of a financial planner and/or accountant to save for retirement. We thus hypothesize:

H3: *Retirement self-efficacy is positively associated with consumers' retirement goal clarity.*

2.4. The moderating role of the consideration of future consequences

The consideration of future consequences is a personality characteristic describing one's attitude to distant as opposed to immediate consequences of potential behaviors (Strathman et al., 1994). Individuals with a low level of consideration of future consequences tend to focus on the immediate consequences of their actions, while those with a high level of consideration of future consequences will assign more importance to the far-reaching consequences of their actions. Therefore, the consideration of future consequences could explain the extent to which retirement self-efficacy triggers consumers' long-term-oriented behavior such as having clear retirement goals. Indeed, individuals' future orientation is an essential variable to explain several financial aspects of their retirement behavior, such as participation in a retirement plan (Howlett et al., 2008).

The consideration of future consequences is generally related to conscientiousness and responsible behavior, including displaying fiscal responsibility (Joireman et al., 2005). Specifically, consumers with a low level of consideration of future consequences tend to direct money away from long-term interests toward short-term benefits (Joireman et al., 2005). These findings allow us to presume that individuals with a low level of consideration of future consequences will be less likely to direct their retirement self-efficacy towards the setting of clear retirement goals, which per definition are long-term-oriented. Indeed, as retirement is a distant goal for most people, the act of thinking about, discussing, or setting goals for the future, particularly in relation to retirement quality of life—as per Stawski et al.'s (2007) definition of retirement goal clarity—demands consumers to have a long-term orientation and thus require a high level of consideration of future consequences.

Prior work supports such reasoning, finding that the consideration of future consequences moderates the impact of beliefs (of a behavior's consequences) on the actual behavior (Joireman & King, 2016). Further, the consideration of future consequences has been found to moderate the effect of self-regulatory efficacy on subsequent responsible behavior such as exercise attendance (Angove Woodgate, 2005). We expect that individuals with higher consideration of future consequences will be more likely to act on setting clear retirement goals once they believe that they have the ability to do so in terms of displaying retirement self-efficacy. We thus hypothesize:

H4: *The effect of retirement self-efficacy on consumers' retirement goal clarity is positively moderated by a stronger consideration of future consequences.*

2.5. The effect of retirement goal clarity on retirement planning activity

Goal-orientated behavior defines consumers' planning activities, including their pre-retirement planning and financial behavior in later life (Noone et al., 2009). The importance of goal setting relates specifically to the clarity of one's goals (Winell, 2019), as clear goals can serve as an indicator whether the goals are achieved or not. According to task goal theory (Locke & Latham, 1990), specific goals drive performance. Social cognitive theory explains that a clear goal facilitates the self-referencing mechanism between appointed goals and actual behavior, driving consumer effectiveness (Cervone et al., 1991). This notion also applies to the retirement context. That is, according to the financial planning model proposed by França and Hershey (2018), financial retirement planning is a function of three main psychological constructs: financial knowledge, retirement goal clarity, and future time perspective. Retirement goal clarity is thus closely related to retirement planning activities (França & Hershey, 2018). In fact, prior research has demonstrated that goal clarity helps explain consumers' level of financial planning activity (Stawski et al., 2007; Tomar et al., 2021). We thus hypothesize:

H5: *Retirement goal clarity is positively associated with consumers' retirement planning activity*.

3 | STUDY 1

Study 1 was designed to establish the effectiveness of a positive framing intervention and empirically test the hypotheses of our conceptual model using a sample of US adult consumers.

3.1. Data collection

To test our hypotheses, we recruited 380 participants from an online panel of Americans maintained by Qualtrics, using quotas to represent as closely as possible the US population in terms of socio-demographics. We excluded 20 participants with incomplete or invalid responses, who straight-lined their answers, reported unreasonable income values, or gave incomprehensible responses to the open-ended questions. The remaining 360 participants were randomly assigned to one of the two experimental framing conditions asking individuals to focus on their strengths (this condition was coded as “1” for the analysis) versus weaknesses (this condition was coded as “0” for the analysis) when assessing their personal resources to achieve a financially secure future. There are no significant differences between the two conditions in terms of participants' gender, age, education, and ethnicity (all *F*-tests, $p > .50$), indicating that the random assignment of participants to the conditions was successful. Finally, we note that the experimental cell sizes were also similar, with 185 (175) participants in the strengths (weaknesses) condition. To examine changes in consumers' actual behavior, we recontacted all participants three months after the initial intervention to measure their (self-reported) retirement planning activity. Out of the 360 participants, 75 remembered the initial study and participated in the follow-up study. Due to the limited sample size of the follow-up, we interpret their results as being of an exploratory nature.

3.2. Sample description

Out of the 360 participants, 157 (203) were male (female), and the average age was 42.9 years. Most participants held a university degree (28.3% have a Bachelor's degree, 11.7% a Master's degree, 2.8% a PhD degree, and 4.7% a professional degree). Further, 53.3% of the participants were employed, 8.1% self-employed, 6.9% unemployed, and 8.6% homemakers. A large fraction of participants were married (46.7%), 30.3% were single, and 10% were divorced. Finally, 75.6% of the participants were Caucasian (9.2% were Black, 5.8% Asian, and 6.4% Hispanic).

3.3. Experimental design

Following the recommendation of prior work in psychology (Spencer et al., 2005), we measured the socio-demographic factors and the moderator (i.e., the consideration of future consequences) *before* the experimental manipulation. We measured the mediator (i.e., locus of control), dependent variable (i.e., retirement self-efficacy), and outcome variable (i.e., retirement goal clarity) *after* the experimental manipulation. For the experimental manipulation, participants were asked to list five personal qualities that relate to their strengths (weaknesses) and explain how these strengths (weaknesses) improved (jeopardized) their ability to achieve a financially secure future (“Please list your main strengths (weaknesses) in terms of your personal characteristics that can help (hinder) achieving a financially secure future”). Based on a word frequency analysis, respondents mentioned 2335 strengths and 2607 weaknesses. The most frequently mentioned strengths included being perseverant (working hard), optimistic, organized (and disciplined), managing money smartly (intelligent), being frugal (saver), confident, and not having dependents. The most frequently mentioned weaknesses included the inability to save, spending a lot of money, not thinking properly about the future and being disorganized, procrastinating, and not planning ahead. To ensure participants would engage in sufficient depth with the experimental manipulation, we required an explanation of at least 140 characters of how exactly they thought that the mentioned strengths (weaknesses) can help (hinder) achieving a financially secure future.

3.4. Manipulation check

To confirm the validity of the experimental design, we performed a separate pre-test checking the manipulations. In particular, we recruited 61 participants from Amazon MTurk, as prior studies show that it provides data as reliable as from traditional sample pools (Goodman & Paolacci, 2017) and it isolates the pre-test sample from the main study's Qualtrics sample, avoiding the possibility of inadvertently inducing demand effects in participants of the main study (Cornelissen et al., 2008). The socio-demographic characteristics of participants in the manipulation check are not significantly different from those in the main study (all F-tests, $p > .50$).

Participants were exposed to one of the two experimental stimuli, responded to the associated open questions, and were then asked to evaluate their nature through open-ended questions and semantic differential scales. Importantly, participants correctly recognized the valence of the experimental conditions. That is, on a semantic differential scale ranging from 1 = very negative to 7 = very positive, the positive framing condition focusing on strengths was perceived as significantly more positive than the negative framing condition focusing on weaknesses ($M_{strengths} = 5.29$, $SD = 1.17$; $M_{weaknesses} = 4.22$, $SD = 1.28$; $p = .000$, $F[1, 60] = 861.55$). We acknowledge that while the valence of the manipulation in the weaknesses condition is evaluated as above the scale mid-point, it is still significantly lower than in the strengths condition, which is in line with our expectations. This result could be explained by the fact that we ask participants to analyze their personality, which does not result in actual self-depreciation. That is, ego-protection motivations (Holtgraves, 2004) could explain why respondents report more extensively characteristics related to their strengths and self-censor regarding their weaknesses (Hayes et al., 2005). This can explain the upwardly biased evaluation of the negative framing condition in terms of its valence. Accordingly, we interpret the fact that the weaknesses manipulation is evaluated as significantly less positive than the strengths manipulation as a satisfactory result in the context of our research.

3.5. Measurement scales

We used established scales with demonstrated validity and reliability, which were modified only in terms of wording to fit the study context or changed to a 7-point Likert scale for consistency and a uniform appearance. Scale items, factor loadings, and construct validity appear in Table 1. To measure retirement self-efficacy, we used six items by Hershey and Mowen (2000), and to measure the consideration of future consequences, we used seven items by Strathman et al. (1994). To measure internal locus of control, we used seven items by Perry and Morris (2005), and to measure retirement goal clarity, we used five items by Stawski et al. (2007). Finally, to measure actual retirement planning activity, we used 10 items, again by Stawski et al. (2007).

All measurement scales are reliable, given that Cronbach's alpha (Nunnally, 1978) and composite reliability (Chin, 1998) both exceed .70. We also establish convergent validity, as all items load significantly on only their underlying constructs and the average variance extracted (AVE) exceeds .50 (Fornell & Larcker, 1981). To establish discriminant validity, we verify that intercorrelations between latent factors do not include unity (Anderson & Gerbing, 1988), while each construct's AVE is greater than the squared correlations between any set of two constructs (Fornell & Larcker, 1981). We also perform an analysis of the heterotrait-monotrait (HTMT) ratio as prescribed by recent scale development literature (Henseler et al., 2015). The ratio is calculated as the average correlations between constructs divided by the geometric mean of the average correlations within items of the same constructs (Voorhees et al., 2016). The HTMT ratio is below the .85 threshold, therefore indicating satisfactory discriminant validity.

3.6. Common method variance

As we embed our experimental manipulation in a survey approach, common method variance (CMV) could potentially bias the results. To overcome and minimize this risk, we employ methodological and statistical solutions (Craighead et al., 2011). First, we include reverse-coded items to minimize compliance effects (Lindell & Whitney, 2001). Second, we verify that the variables do not load on a single factor by performing Harman's single-factor test with exploratory factor analysis (Podsakoff et al., 2003). Finally, we include in our questionnaire a theoretically unrelated question on attitude toward the color blue (Simmering et al., 2015) and conduct a Lindell and Whitney (2001) marker variable test. The marker variable does not correlate significantly with any of the other variables. In sum, all tests indicate CMV risk is minimized in Study 1.

3.7. Social desirability bias

Due to our study's direct questions about the relatively sensitive topic of financial planning, it is important to be vigilant about social desirability bias (SDB) affecting participants' responses. SDB "is the tendency of subjects to respond to test items in such a way as to present themselves in socially acceptable terms to gain the approval of others" (King & Bruner, 2000, p. 81). Fortunately, there are a number of solutions to reduce the risk of SDB. Some of these solutions—such as randomized questions or indirect questions (Krumpal, 2013)—would contradict our experimental design and research objective, but other solutions were viable and implemented. In particular, we took the following methodological steps to minimize SDB risk in Study 1.

First, we made sure to use forgiving wording and instructed participants that there were no right or wrong answers and that we were interested in their personal response (Näher & Krumpal, 2012), thus ensuring that there was no negative connotation to the weaknesses condition. Previous research confirmed the effectiveness of such introductions (Persson & Solevid, 2014). We also highlighted the anonymity of the responses and the academic nature of our study (Krumpal, 2013). Second, we employed a self-administered questionnaire to avoid the personal impact and heightened potential for SDB associated with a personal encounter with the researcher (Walzenbach, 2019). Third, we asked respondents to analyze and explain how every stated strength or weakness impacted their capability to plan for retirement. Thus, we shifted participants' mindset from desirable responding to a reflective perspective, thereby stimulating them to share their real thoughts and feelings

TABLE 1 Scale items, factor loadings, and construct validity of Study 1 and Study 2

Construct	Item wording	Study 1 Mean	Study 1 *SD*	Study 1 Item loading	Study 1 α	Study 1 AVE	Study 1 CR	Study 2 Mean	Study 2 *SD*	Study 2 Item loading	Study 2 α	Study 2 AVE	Study 2 CR
Consideration of future consequences	1. I only act to satisfy immediate concerns, figuring the future will take	4.69	1.74	.821	.870	. 512	.864	4.56	1.66	.876	.916	. 669	.933
(Strathman et al., 1994)	care of itself. (R)	4.61	1.71	.794				4.52	1.68	.870			
	2. My behavior is only influenced by the immediate (i.e., a matter of	3.89	1.58	.576				3.67	1.51	.588			
	days or weeks) outcomes of my actions. (R)	4.94	1.72	.758				4.68	1.80	.834			
	3. My convenience is a big factor in the decisions I make or the actions	4.82	1.75	.748				4.55	1.83	.843			
	I take. (R)	4.78	1.76	.820				4.44	1.81	.884			
	4. I generally ignore warnings about possible future problems because I	4.43	1.63	.653				3.95	1.62	.793			
	think the problems will be resolved before they reach crisis level. (R)												
	5. I think that sacrificing now is usually unnecessary since future outcomes can be dealt with at a later time. (R)												
	6. I only act to satisfy immediate concerns, figuring that I will take care of future problems that may occur at a later date. (R)												
	7. Since my day-to-day work has specific outcomes, it is more important to me than behavior that has distant outcomes. (R)												
Internal locus of control	1. There is really no way I can solve some of my problems. (R)	4.79	1.68	.776	.833	.683	.937	4.18	1.79	.832	.851	.551	.884
(Perry & Morris, 2005)	2. I am being pushed around in life. (R)	5.26	1.77	.785				4.24	1.80	.846			
	3. There is little I can do to change the important things in my life. (R)	5.15	1.71	.835				4.19	1.72	.870			
	4. I can do anything I set my mind to.	5.54	1.37	.873				4.79	1.56	.280			
	5. What happens to me in the future depends on me.	5.70	1.29	.878				5.17	1.35	.328			
	6. I am helpless in dealing with the problems of life. (R)	5.49	1.66	.827				4.54	1.85	.847			
	7. I have little control over the things that happen to me. (R)	5.06	1.78	.809				4.24	1.73	.891			
Retirement goal clarity	1. I will set clear goals for gaining information about retirement.	4.44	1.87	.875	.895	.706	.923	4.63	1.68	.906	.932	.787	.948
(Stawski et al., 2007)	2. I will think a great deal about quality of life in retirement.	4.86	1.74	.864				4.75	1.66	.894			
	3. I will set specific goals for how much will need to be saved for	4.59	1.82	.873				4.75	1.66	.893			
	retirement.	4.64	1.77	.767				4.71	1.76	.898			
	4. I have a clear vision of how life will be in retirement.	4.66	1.94	.819				4.86	1.82	.845			
	5. I will discuss retirement plans with a spouse, friend, or significant other.												
Retirement planning activity	1. Read books/articles/brochures on financial planning or	2.57	1.78	n/a [a]	n/a [a]	n/a [a]	n/a [a]						
(Stawski et al., 2007)	superannuation.	2.48	1.83										
	2. Visited financial planning or superannuation sites on the Internet.	2.87	1.91										
	3. Discussed retirement with family, friends, or colleagues.	2.47	1.82										
	4. Visited retirement Web sites on the Internet.	2.40	1.74										
	5. Read books/articles/brochures about retirement.	2.10	1.66										
	6. Participated in workshop, seminar, or course on retirement.	2.23	1.69										
	7. Visited Web sites on postretirement work/activity.	2.26	1.78										
	8. Read books/articles/brochures on postretirement work/activity.	2.42	1.87										

(Continues)

TABLE 1 (Continued)

Construct	Item wording	Study 1 Mean	Study 1 *SD*	Study 1 Item loading	Study 1 α	Study 1 AVE	Study 1 CR	Study 2 Mean	Study 2 *SD*	Study 2 Item loading	Study 2 α	Study 2 AVE	Study 2 CR
	9. Watched/listened to shows on postretirement work/activity.	2.58	1.92										
	10. Spoken to relevant person(s) about postretirement work/activity.												
Retirement self-efficacy	1. I am very knowledgeable about financial planning for retirement.	4.19	1.71	.876	.912	.696	.932	4.53	1.49	.871	.884	.636	.912
(Hershey & Mowen, 2000)	2. I know more than most people about retirement planning.	3.92	1.87	.842				4.18	1.56	.802			
	3. I am very confident in my ability to do retirement planning.	4.31	1.79	.870				4.67	1.51	.821			
	4. When I have a need for financial services, I know exactly where to	4.59	1.78	.788				5.00	1.45	.743			
	obtain information on what to do.	4.57	1.82	.766				4.85	1.40	.681			
	5. I am knowledgeable about how Social Security works.	4.18	1.87	.860				4.81	1.43	.853			
	6. I am knowledgeable about how private investment plans work.												
Balanced inventory of desirable	**Self-deceptive enhancement**							3.76	1.78	.660	.641	.361	.800
responding (BIDR)	1. I have not always been honest with myself. (R)							4.69	1.47	.588	.683	.319	.776
(Hart et al., 2015)	2. I always know why I like things.							3.99	1.69	.571			
	3. It's hard for me to shut off a disturbing thought. (R)							3.42	1.77	.058			
	4. I never regret my decisions.							3.73	1.71	.555			
	5. I sometimes lose out on things because I can't make up my mind							4.75	1.57	.698			
	soon enough. (R)							5.01	1.32	.741			
	6. I am a completely rational person.							3.74	1.78	.661			
	7. I am very confident of my judgments.							3.73	1.79	.728			
	8. I have sometimes doubted my ability as a lover. (R)							4.33	1.68	.616			
	Impression management							3.71	1.69	.693			
	9. I sometimes tell lies if I have to. (R)							3.99	1.89	.615			
	10. I never cover up my mistakes.							3.55	1.69	.607			
	11. There have been occasions when I have taken advantage of							4.22	1.60	.253			
	someone. (R)							5.47	1.49	.486			
	12. I sometimes try to get even rather than forgive and forget. (R)							4.30	1.70	.754			
	13. I have said something bad about a friend behind his or her back. (R)												
	14. When I hear people talking privately, I avoid listening.												
	15. I never take things that don't belong to me.												
	16. I don't gossip about other people's business.												
Financial literacy	1. Suppose you have some money. Is it safer to put your money into							.70	.46	n/a [b]	n/a [b]	n/a [b]	n/a [b]
(Lusardi & Mitchell, 2011)	one business or investment, or to put your money into multiple							.75	.43				
	businesses or investments? [One business or investment;							.73	.44				
	Multiple business or investment; Do not know]							.64	.48				
	2. Suppose over the next 10 years the prices of the things you buy							2.81	1.21				
	double. If your income also doubles, will you be able to buy less												
	than you can buy today, the same as you can buy today, or more												
	than you can buy today? [Less; **The same**; More; Do not know]												

TABLE 1 (Continued)

Construct	Item wording	Study 1 Mean	Study 1 SD	Study 1 Item loading	Study 1 α	Study 1 AVE	Study 1 CR	Study 2 Mean	Study 2 SD	Study 2 Item loading	Study 2 α	Study 2 AVE	Study 2 CR
	3. Suppose you need to borrow 100 US dollars. Which is the lower amount to pay back: 105 US dollars or 100 US dollars plus three percent? [**105 US dollars**; 100 US dollars plus three percent; Do not know]												
	4. Suppose you had 100 US dollars in a savings account and the bank adds 10 percent per year to the account. How much money would you have in the account after five years if you did not remove any money from the account? [**More than $150**; Exactly $150; Less than $150; Do not know]												
	Total average financial literacy score												
Marker variable (Simmering et al., 2015)	1. I like the color blue.	5.75	1.38	n/a	n/a	n/a	n/a	5.69	1.19	n/a	n/a	n/a	n/a

Note: SD = standard deviation; α = Cronbach's alpha; AVE = average variance extracted; CR = composite reliability; RC = reverse-coded; [a] = not applicable as individual items of retirement planning activity scale are studied individually; b = not applicable as this is a formative scale; correct answers of the financial literacy scale are in bold.

(Grimm, 2010). Overall, while SDB is always a potential concern in surveys on sensitive topics, we believe that above-mentioned methodological design solutions have helped reduce the potential of social desirability bias affecting the results of our study. Furthermore, we note that the actual harm of SDB to the validity of studies is still debated, as people responding in a socially desirable way in questionnaires tend to behave in the same way in real life (Tracey, 2016).

3.8. Experimental results

We use Model 87 from Hayes and Preacher's (2014) SPSS Process macro to test (i) the effect of personal resources framing on retirement self-efficacy (H1), (ii) the mediation of this effect by locus of control (H2), (iii) the consequent effect of retirement self-efficacy on goal clarity (H3), and finally (iv) the moderating effect of the consideration of future consequences (H4). The model employs 5000 bootstrapped samples. We use the modern approach to test moderated mediation as developed by Hayes and Preacher (2014), as the traditional approach by Baron and Kenny (1986) is increasingly criticized in the consumer research literature (Zhao et al., 2010).

We find that adopting a positive frame when asking participants to assess their personal resources to achieve a financially secure future has a direct positive effect on their retirement self-efficacy (coef. = .260; 95% confidence interval [CI] = .029–.412), providing support for H1. Next, we find that this effect is mediated by locus of control in that adopting positive framing leads to a higher internal locus of control (coef. = .356; 95% CI = .120–.591), which in turn increases retirement self-efficacy (coef. = .297; 95% CI = .163–.431). The effect of positive framing on retirement self-efficacy is fully mediated by locus of control (indirect effect: coef. = .105; 95% CI = .029–.204; direct effect: coef. = .260; 95% CI = −.046–.567). These results provide support for H2. In turn, we find that retirement self-efficacy is positively related to individuals' retirement goal clarity (coef. = .679; 95% CI = .558–.800), providing support for H3. Finally, the effect of retirement self-efficacy on goal clarity is moderated by the consideration of future consequences (coef. = −.203; 95% CI = −.383 to −.039). Thus, the effect of retirement self-efficacy on retirement goal clarity is weaker (stronger) for individuals having a higher (lower) consideration of future consequences ($\text{coef.}_{\text{low\_CFC}}$ = .679; 95% CI = .558–.800; $\text{coef.}_{\text{high\_CFC}}$ = .476; 95% CI = .348–.604). The negative moderation by consideration of future consequences indicates that we do not find support for H4.

We use the follow-up study to show the effect of retirement goal clarity on actual financial planning activity three months after the initial intervention. In support of H5, we find that retirement goal clarity has a direct positive effect on the financial planning activities of Stawski et al. (2007). Specifically, retirement goal clarity is positively associated with individuals being more prone to read books, articles, and brochures on financial planning (coef. = .438, *SE* = .192, $p < .050$), retirement (coef. = .494, *SE* = .191, $p < .050$), and post-retirement work and activity (coef. = .413, *SE* = .199, $p < .050$), respectively. Retirement goal clarity is also positively associated with being more prone to visit websites on financial planning (coef. = .499, SE = .201, p < .050) and retirement (coef. = .431, SE = .198, p < .050); discussing retirement with family, friends, and colleagues (coef. = .431, SE = .194, p < .050), and speaking about post-retirement work and activity with relevant others (coef. = .397, SE = .207, p < .050). Finally, retirement goal clarity is positively associated with individuals' participation in workshops and seminars on retirement (coef. = .403, SE = .185, p < .050) and watching/listening to TV and radio shows on post-retirement work and activity (coef. = .491, SE = .208, p < .050).

4 | STUDY 2

Study 2 aimed to replicate the results of Study 1 using an alternative manipulation with more external validity in a marketing context (i.e., an advertisement) as well as measure and control for differences in participants' level of financial literacy and social desirability bias.

4.1. Data collection

We recruited a sample of 300 US adult consumers from Amazon MTurk, which prior research has shown to provide reliable data (Goodman & Paolacci, 2017). We excluded 76 participants who either provided incomplete or invalid responses or who failed an attention check. The remaining 224 participants were randomly assigned to one of two conditions, presenting them with an advertisement focusing either on individuals' strengths (this condition was coded as "1" for the analysis) versus weaknesses (this condition was coded as "0" for the analysis) in terms of personal characteristics that help them to versus hinder them from successful retirement planning.

In the strengths condition, the advertisement recapitulated the four personal characteristics that were most frequently mentioned by participants in the initial experiment as helping successful retirement planning (i.e., being optimistic, organized, confident, and perseverant) while in the weaknesses condition, the advertisement recapitulated the four personal characteristics that were most frequently mentioned by participants in the initial experiment as hindering successful retirement planning (i.e., being pessimistic, disorganized, not confident, and a procrastinator).

There are no significant differences between the two conditions in terms of participants' gender, age, education, and ethnicity (all F-tests, p > .50). The experimental cell sizes were also of similar size, with 107 (117) participants in the strengths (weaknesses) condition. Thus, the random assignment of participants to the two experimental conditions was successful.

4.2. Sample description

Out of the 224 participants, 50% were male (female), and the average age was 39.5 years. Most participants held a university degree (44.6% have a Bachelor's degree, 29% a Master's degree, 1.3% a PhD degree, and 2.7% a professional degree). Further, 79.9% of the participants were employed, 15.2% self-employed, 2.7% unemployed, and 0.9% homemakers. Most participants were married (59.8%), while 27.7% were single, and 5.4% were divorced. The participants were 83% Caucasian, 9.8% Black, 3.1% Asian, and 0.9% Hispanic. We note that the sample of Study 2 is not significantly different from the sample used in Study 1 in terms of participants' age, ethnicity, and relationship status (all F-tests, p > .50). However, we do note that Study 2's sample is more balanced in terms of gender as well as slightly more educated and employed than Study 1's sample.

4.3. Experimental design

After being shown the advertisement, we asked participants to reflect upon them by providing an open answer explaining how the listed personal characteristics helped them to versus hindered them from successfully planning for retirement. As in Study 1, we again required participants to write a minimum of 140 characters to ensure sufficient attention to the ads and reflection on the topic. The format of the advertisements was inspired by campaigns of the Consumer Financial Protection Bureau and Financial Health Network. We took care to keep the graphics of the strengths versus weaknesses condition ad similar and use the same colors, to avoid potential confounding effects of color priming (e.g., Kliger & Gilad, 2012). To prevent information overload, the ads were of a very basic design (Agnew & Szykman, 2005). Figures A1 and A2 in Appendix A depict the actual advertisements shown to participants in the strengths versus weaknesses conditions.

4.4. Manipulation check

To confirm the validity of the experimental manipulation of Study 2, we carried out a separate pre-test with another 104 participants from Amazon MTurk. To avoid demand effects, we made sure to filter out all respondents that participated in this pre-test, so that they could not take part in the main study. Importantly, the socio-demographic characteristics of participants in the manipulation check are not significantly different from those in the main study (all F-tests, p > .50).

As in Study 1, participants of this pre-test evaluated one of the two experimental stimuli in terms of its perceived negativity versus positivity. We confirm that participants correctly recognized the valence of the experimental conditions according to a semantic differential scale ranging from 1 = very negative to 7 = very positive. In particular, the positive framing condition focusing on strengths was perceived as significantly more positive than the negative framing condition focusing on weaknesses ($M_{strengths}$ = 5.96, SD = .69; $M_{weaknesses}$ = 3.54, SD = 2.03; p = .000, F[1, 103] = 64.60). Furthermore, the valence of the advertisement in the weaknesses condition is evaluated below the scale mid-point, while in the strengths condition it is evaluated above the mid-point, further confirming the validity of the experimental manipulation.

4.5. Measurement scales

We used the same measures as in Study 1, but added four items on financial literacy by Lusardi and Mitchell (2011), given its potential relationship with retirement self-efficacy. We also added 16 items measuring social desirability bias through the Balanced Inventory of Desirable Responding (BIDR) short-form by Hart et al. (2015), given the potentially sensitive nature of the topic of financial planning. All measures are reliable and valid as per the standard thresholds recommended by the literature (Table 1). Consistent with prior work, the self-deceptive positivity and impression management dimensions of the BIDR measure have a low AVE, but this has been argued to not jeopardize the validity of the measure as such (cf. Hart et al., 2015).

4.6. Common method variance

We applied the same methodological and statistical solutions to control for potential CMV bias as in Study 1 (Craighead et al., 2011). That is, we included reverse-coded items (Lindell & Whitney, 2001), verified that the variables do not load on a single factor (Podsakoff et al., 2003), and made sure that according to a marker variable test the operationalized variables do not correlate with a theoretically unrelated question (i.e., attitude toward the color blue [Simmering et al., 2015]). We confirm that all tests suggest that CMV bias is not a significant risk to Study 2.

4.7. Social desirability bias

In addition to employing the methods to prevent SDB from occurring in the first place as in Study 1, we followed King and Bruner's (2000) recommendation and also administered a BIDR scale. In particular, following the guidance from the literature (Asgeirsdottir et al., 2016), we carried out polytomous scoring and included the two dimensions of Hart et al.'s (2015) BIDR scale (i.e., self-deceptive enhancement and impression management) as control variables in our analysis.

4.8. Experimental results

We run the same analysis as in Study 1, using model 87 from Hayes and Preacher's (2014) SPSS Process macro. We find that positive framing in the advertisement has a direct positive effect on retirement self-efficacy (coef. = .337; 95% CI = .049–.625), again supporting H1. Furthermore, this effect is partially mediated by locus of control (indirect effect: coef. = .076; 95% CI = .015–.165), so that positive framing leads to a higher internal locus of control (coef. = .399; 95% CI = .131–.667), which in turn is directly and positively related to retirement self-efficacy (coef. = .184; 95% CI = .044–.325), again supporting H2. Next, we find that retirement self-efficacy is positively associated with higher retirement goal clarity (coef. = 1.134; 95% CI = .623–1.646), again providing support for H3. Finally, the consideration of future consequences does not moderate the effect of retirement self-efficacy on retirement goal clarity (coef. = −.096; 95% CI = −.207–.014), so we do not find support for H4. The absence of moderation by consideration of future consequences could potentially be explained by its high correlation with financial literacy (coef. = .532, $p < .001$), which is included in the analysis as a control variable. Note that we also control for social desirability bias through the BIDR scale.

5 | DISCUSSION AND CONCLUSION

5.1. Summary of findings and implications for theory

Given their consequences for individual and societal well-being, retirement planning and preparation have become topics of vital importance (Brüggen et al., 2017; Netemeyer et al., 2018). While individuals are increasingly expected to assume responsibility for their financial future (van Rooij et al., 2011), many fail to do so because they lack retirement self-efficacy (Peeters et al., 2018). Retirement self-efficacy is key to proactive and effective financial decision-making (Farrell et al., 2016; Hoffmann & Plotkina, 2020) and is considered equally important as objective financial planning skills (Lind et al., 2020). Improving retirement self-efficacy could empower individuals to take their financial future into their own hands, but the question of how to effectively stimulate retirement self-efficacy has not been answered to date.

We address this question by joining and extending previously disconnected streams of research on retirement preparation, financial self-efficacy, and retirement goal clarity. In particular, we examine the relationship between personal resources framing and retirement self-efficacy and study the mediating role of locus of control. In doing so, we improve our understanding of the process underlying the framing effect, thereby adding to the literature regarding the antecedents and consequences of self-efficacy (Gist & Mitchell, 1992). Furthermore, we investigate the extent to which retirement self-efficacy translates into retirement goal clarity across different personality types by examining the moderating role of consumers' consideration of future consequences.

Our key findings are that positive framing employing a strength-inducing intervention leads to higher retirement self-efficacy and consequently a stronger retirement goal clarity. These are important results, given retirement goal clarity's close association with improved financial performance (Hershey et al., 2003; Petkoska & Earl, 2009; Stawski et al., 2007). Notably, we also document that an increase in individuals' internal locus of control explains the positive (negative) effect of the strengths (weaknesses) intervention on their retirement self-efficacy. We also confirm that having a greater retirement goal clarity positively affects individuals' actual retirement planning activity in the three months following an initial intervention. This result supports the real-world relevance of improving consumers' retirement goal clarity, while the time delay in our follow-up addresses a common concern in the literature of most studies only assessing the short-term impact of financial interventions but not the potential longer-term impact (see, e.g., Fernandes et al., 2014).

The results increase our understanding of the role of locus of control in personal financial management and ultimate economic success (cf. Pinger et al., 2018) and extend prior work that finds that an external locus of control is negatively related to responsible (financial) behavior (Cleveland et al., 2012; Perry & Morris, 2005), while an internal locus of control is positively related to sound financial decision-making (Cobb-Clark et al., 2016; Hoffmann & Risse, 2020). Indeed, we posit that developing an internal locus of control is a crucial precondition for the translation of individuals' perceptions of their personal ability to achieve a financially secure future into increased retirement self-efficacy.

Finally, our results demonstrate the relevance of the consideration of future consequences in the retirement planning context (cf. Joireman et al., 2005). Apprehension about the long time frame and the far-away consequences of one's immediate actions are central in explaining why many consumers are not motivated to (start to) prepare for their retirement (Eberhardt et al., 2021). Indeed, we find that for people with high consideration of future consequences, the effect of increasing retirement self-efficacy on retirement goal clarity is weaker. Arguably, these individuals are already thinking about the future and do not need a boost in retirement self-efficacy to strengthen their retirement goal clarity, thus explaining the negative moderation. Alternatively, people with high consideration of future consequences arguably perceive a greater threat of insufficient capabilities and thus need higher and more stable levels of retirement self-efficacy to translate this self-efficacy into behavior than do individuals characterized by a lower level of consideration of future consequences (Lindsay & Strathman, 1997). Another potential explanation is that an increased focus on the future can lead to (excessive) rumination, which can hinder clear goal-setting and action-taking by individuals (Moss et al., 2017).

5.2. Implications for practice

Our results offer various guidelines for promoting personal financial planning and helping individuals take charge of their personal finances. The OECD (2020) stresses the importance of empowering people, and our results suggest that addressing self-efficacy is an important means to do so. The Aegon Retirement Readiness Survey (Aegon, 2019) indicates that only 29% of individuals are confident of being able to retire and maintain a comfortable lifestyle. While many concerns stem from assessments of (financial) market and working conditions, addressing confidence itself is also critical. In this regard, our results suggest that practitioners should employ positive framing to enhance individuals' assessment of their personal resources and character strengths to improve their retirement self-efficacy and consequent retirement planning.

To ensure that these interventions and stimuli are effective, our results recommend highlighting the personal ability of individuals to manage their financial future to activate a stronger internal locus of control. Thus, a positive framing of campaigns should imply that individuals are in control of their finances and that they are capable to make retirement decisions and that their own decisions and actions have a crucial impact on their financial future. This sense of control can be translated into further financial activity. This can be done through communication campaigns and interventions which boost people's beliefs of retirement self-efficacy and highlight a sense of control over one's retirement future and ability to successfully plan for retirement. The experimental results reported in Study 2 provide a practical example thereof.

This approach aligns with a recent campaign by the U.S. Social Security Administration (2020), which suggests resources and services to help citizens "stay in control." Similarly, the UK Government website (GOV.UK, 2020), implies an individual's complete control over retirement decisions (e.g., "check when you can retire," "decide when to retire"). These campaigns build their rhetoric around the empowerment of consumers, as they proclaim that consumers can and should have their retirement under control and suggest simple actions to operationalize this belief. The shifting of decision-making power—as well as responsibility—from the government and employer to the employee can be beneficial in making people act upon their retirement planning. On the other hand, the Pension Benefit Guarantee Corporation (2020), an agency of the US Government, highlights employers' responsibility to secure employees' pension benefits and the agency's commitment to that objective. While this emphasis might be effective in building trust in this agency, it could also inadvertently reduce consumers' perceived responsibility and control over their pension benefits, potentially making them less eager to manage their own retirement. To increase the effectiveness of policy interventions in the long term, policymakers should ensure that their campaigns are repeated regularly, otherwise, the effect of information provision might fade (Fernandes et al., 2014).

Based on our results, further actions might be taken to reinforce consumers' perceived personal strengths and act upon their locus of control and retirement self-efficacy. For instance, consumers might use mobile applications similar to those proposed to set and achieve health goals (e.g., Plant Nanny) to set personal financial goals, appoint an easy and clear plan to attain those goals, get a reminder on the goals, and get praise on making even small positive achievements. As adoption of retirement apps depends to a large extent on the initial self-efficacy of consumers (Hentzen et al., 2021), these apps and related campaigns might use a promotional tool with a short test to uncover consumers' strengths and connect with their perception of personal resources. Furthermore, while there are multiple goal attaining apps in the market (e.g., Strides or Goals on Track) most of them relate to the envisioned goal and day-to-day performance, while none of them are built on the actual profile and perception of one's *ability to achieve* these goals. Therefore, including personalized and motivational information in these apps might attract a wider audience and help its users form clear goals and keep up with goal achievement. Practically, apps can have regular check-ins (similar to the mood check-ins used by the Calm app) highlighting the positive and boosting self-appreciation (e.g., "it is great that you feel positive today, you have been on track this month, keep beaming") and attenuating the negative (e.g., "it is ok if you feel down today, but after every storm there will be a rainbow, keep your spirit up").

Another promising tool to empower consumers and give them a sense of control and self-efficacy is to provide a platform that facilitates personal information exchange, such as finance blogs (Hoffmann & Otteby, 2018). Indeed, finance blogs can adopt a positive tone to fit the needs of consumers with relatively low retirement self-efficacy and provide personal and relatable examples of (other) consumers' personal resources and their importance in retirement planning. In this regard, message framing in online pension communication has been found to increase engagement behavior and improve consumers' financial well-being (Eberhardt et al., 2021).

Furthermore, we find that strength-inducing interventions seem to be more effective for people who are not yet strongly considering the future consequences of their behavior and are thus less predisposed to long-term planning. This finding suggests that retirement interventions are more effective with people who need them the most. It might also indicate that individuals who engage in irresponsible behavior and focus exclusively on the present might do so owing to a perceived inability to take care of their future rather than because of actual unwillingness to plan for the future, and that their behavior can be improved with positive inducement (cf. Toepoel, 2010). Indeed, Mullainathan and Shafir (2013) argue that scarcity shifts consumers' attention and alters the allocation of scarce resources. This mechanism might mean that consumers focus on one goal while ignoring other goals due to scarce resources. For example, some consumers might be hard to motivate to plan for retirement, given that immediate financial concerns occupy their minds.

5.3. Limitations and future research

Like every study, our work has some limitations, which offer promising opportunities for future research. First, to avoid demand effects, we asked participants to list what personal characteristics can help (hinder) them from engaging in successful retirement planning management without providing information on how personal resources could influence their financial management capabilities. However, future research could provide this information and ask respondents to identify the qualities they believe they possess. However, a potential limitation of this approach is that respondents might try to guess the researchers' hypotheses and react in a way that presumably supports these (i.e., the earlier-mentioned demand effects).

Second, further research could identify what particular strengths contribute to people's retirement self-efficacy (cf. Proctor et al., 2011). Such research endeavors could be guided by the Big Five personality framework, as Gerhard et al. (2018) find that the Big Five are associated with consumers' savings levels. Indeed, the Big Five personality framework seems promising to help understand retirement planning behavior, as personality affects people's investment, saving, and borrowing behavior (Nyhus & Webley, 2001), retirement relevance and perceived financial preparedness (Hershey et al., 2003), and retirement adjustment and well-being in retirement transition (Hansson et al., 2020).

Third, to better explicate why some people feel more empowered by self-efficacy-oriented manipulations than others, further research might take into account such psychological phenomena as the persistence–licensing response, which captures individuals' response to previous success in achieving sub-goals and whether it helps them achieve further milestones (Zemack-Rugar et al., 2019). Doing so would build on our results regarding the moderating effect of the consideration of future consequences and shed further light on the results' underlying psychological processes.

Fourth, further studies could capture longitudinal or cross-generational strength-oriented incentives to increase retirement self-efficacy. While most retirement interventions aim to facilitate a smooth transition to retirement for older individuals (Seiferling & Michel, 2017), people of different ages might require different approaches to stimulate responsible retirement planning. For example, owing to differences in retirement proximity, the consideration of future consequences likely differs for younger versus older people. Interestingly, the consideration of future consequences is a changeable trait (Toepoel, 2010), which can actually lower with age (Orbell et al., 2004). Thus, interventions should target a specific age group for optimal incentivization.

Fifth, it is worth noting that the ongoing shift from defined-benefit to defined-contribution retirement plans (Hoffmann & Otteby, 2018) might have elevated the level of internal locus of control in the general population. However, as we are interested in *differences* in locus of control between experimental conditions, a potential overall increase in the level of locus of control across the population would not pose a concern to our study. Nevertheless, future research might explore the evaluation of perceived locus of control when shifting from a defined-benefit to a defined-contribution retirement plan and its implications for consumer behavior.

Sixth, recent work has started to address the notion of *adaptive* self-efficacy, which refers to "an individual's belief that he or she is competent to adapt to new work aspects or master new task demands" (Luu, 2020, p. 1293). It would be interesting for future research to examine how positive framing interventions such as the ones employed in our current work could influence consumers' belief that they are *able to adapt* to new task demands. This is in particular relevant given the aforementioned shift from a defined-benefit to a defined-contribution retirement system, which poses new and challenging task demands on consumers in terms of managing their retirement wealth.

Finally, future research could take the notion of financial scarcity into account. The financial constraints associated with financial scarcity influence consumer behavior in important ways, as argued by the integrative frameworks of Cannon et al. (2019) and Hamilton et al. (2019a, 2019b). In particular, consumers with constrained backgrounds and those who can be identified as vulnerable, tend to have a lower internal locus of control and as a result a shorter time orientation and lower consideration of future consequences (Mittal & Griskevicius, 2014). Financial scarcity is thus expected to influence responsiveness to policy interventions and the associated constraints could be included as a moderator in future research on the topic. More generally, it is important to note that scarcity can induce consumer anger (Biraglia et al., 2021), which can again influence how target consumers will respond to policy interventions.

Despite these limitations, our paper contributes to the scarce literature on how to increase individuals' retirement self-efficacy and provides practical implications for policymakers and business practitioners on how to empower individuals to take charge of their personal finances.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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APPENDIX A

Experimental Stimuli of Study 2

See Figures A1 and A2.

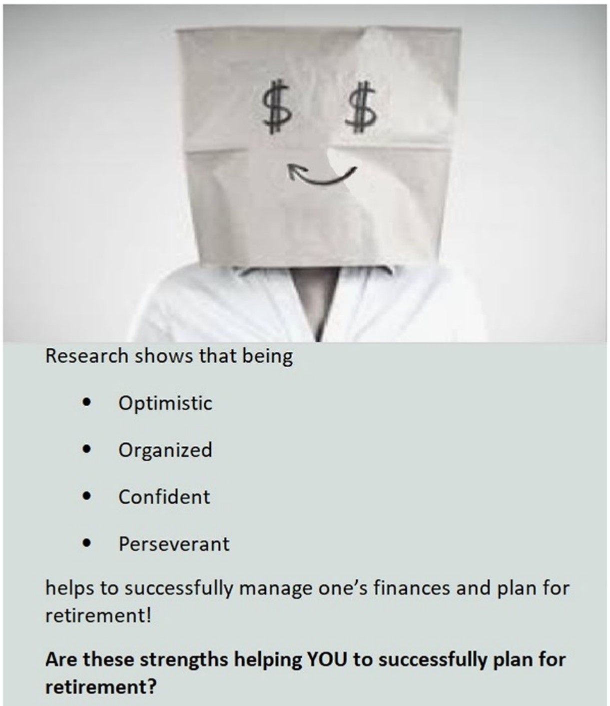

FIGURE A1 Advertisement used in strengths condition

FIGURE A2 Advertisement used in weaknesses condition