How does Consumer Vulnerability Impact Financial Outcomes?
The Mediating and Moderating Role of Psychological Characteristics

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Introduction

"Vulnerable" consumers are those deemed to be at particular risk of financial detriment. As a result of their vulnerability, these consumers may need particular care or attention to make effective financial decisions, and achieve positive financial outcomes, such as not being in arrears regarding essential payments (e.g., utilities, consumer credit, rent/mortgage), achieving savings, or participating in financial markets through investing. While different regulatory, statutory, and consumer advocacy groups in the UK variously define "consumer vulnerability", there are a number of overlaps, and there is a general consensus that vulnerable consumers are at a disadvantage in the financial domain. As part of a call to action for greater understanding of how vulnerable consumers can be better supported, the Financial Conduct Authority (2014) – the UK's principal financial regulation body – recently collated eleven commonly regarded risk factors that indicate consumer vulnerability. However, academic research has yet to take a multifaceted approach to understand how these various risk factors are connected to financial outcomes. To that end, the aim of this study is to build a nomological network, investigating how consumer vulnerability is differentially related to a number of individual-level psychological characteristics (cognitive and non-cognitive), and in turn whether such characteristics may mediate and/or moderate any links between consumer vulnerability and various financial outcomes. Our investigation is founded on a review of the pertinent literature, which resulted in examining a range of psychological characteristics with previously-established links to consumer financial decision-making. These characteristics include financial literacy (van Rooij, Lusardi, & Alessie, 2011), numeracy (Cokely, Galesic, Schulz, Ghazal, & Garcia-Retamero, 2012), time preference (Binswanger & Carman, 2012), personal savings orientation (Dholakia, Tam, Yoon, & Wong, 2016), propensity to plan for money (Lynch, Netemeyer, Spiller, & Zammit, 2010), construal level (Ülkümen & Cheema, 2011; van Schie, Dellaert, & Donkers, 2015), and regulatory focus (Zhou & Pham, 2004). Our first aim is to identify links between consumer vulnerability and these characteristics, and relatedly between said characteristics and financial outcomes such as savings and investment levels, and having experienced various types of arrears. We subsequently develop targeted mediation and moderation models to further uncover how consumer vulnerability exerts an influence on these kinds of outcomes. Understanding the psychological-level factors that characterise vulnerable consumers may elucidate capacities or attitudes that could serve as a basis upon which to develop tailored financial advice or effective policy interventions to help vulnerable consumers achieve positive financial outcomes or to refine how financial services firms such as banks or credit unions most effectively communicate with their clients or members.

Method

Participants

N=360 US-based participants were recruited via Amazon MTurk. An advert on MTurk indicated that respondents were being sought for a study on the relationship between psychological characteristics and financial behaviour. No screening criteria were used, but attention check items were employed to detect and remove inattentive responders. N=39 failed at least one of three attention check items and as such were not included in analyses. The remaining N=321 had an average age of 33.07 years (SD=9.87 years), and comprised 164 males (51.1%), 130 educated to university level (43.3%), and 61 non-white participants (19%). Participants received $3 each as compensation for participating in our study, which they on average completed in 22 minutes. Accordingly, their hourly wage was $8, consistent with Paolacci's (2015) recommendations, which stipulate a minimum hourly wage of $6.

Design, Materials, and Procedure

Participants completed a survey entailing a range of existing and previously validated measures designed to assess various psychological characteristics associated with financial behaviour. Assessments included personal savings orientation (Dholakia et al., 2016); financial literacy (van Rooij et al., 2011); construal level (Ülkümen & Cheema, 2011; van Schie et al., 2015); time preference (Binswanger & Carman, 2012); regulatory focus (Zhou & Pham, 2004), propensity to plan for money (Lynch et al., 2010), and numeracy (Cokely et al., 2012). Ten discrete items assessed consumer vulnerability, selected in accordance with the risk factors as denoted by the UK Financial Conduct Authority (2014) (e.g. mental/physical health issues; debt and low income). A set of 10 binary vulnerability variables was created, which were summed to an overall vulnerability score. For some of the above assessments that involved a range of responses, we produced a "25%" version of the associated vulnerability variable – this reflects people who are vulnerable in this domain according to being in the lower 25% percentile of scores. Financial outcomes were established via five items assessing a consumer's total household savings; total household investments; and their experiences of having been in arrears in three key domains: utilities, consumer credit, and rent/mortgage.

Results

Preliminary results show that consumer vulnerability is negatively associated with positive financial outcomes regarding savings and investment levels, and positively associated with negative financial outcomes regarding being in arrears on various payments. In terms of correlations with the psychological characteristics, we find a negative correlation between being vulnerable and having a strong personal savings orientation (PSO), displaying a prevention-oriented regulatory focus, being financially literate, and having high numeracy. We find no correlations between vulnerability and a consumer's construal level or propensity to plan for money. In terms of mediation effects, we find that in particular PSO, which captures the chronic tendency to save money in a consistent and sustained manner (Dholakia et al., 2016), is an important mediator of the effect of consumer vulnerability on financial outcomes. For example, PSO fully mediates the effect of consumer vulnerability on saving levels, and partially mediates the effect of consumer vulnerability on being in arrears regarding utility payments. In terms of moderation effects, we again find an important role of PSO, in that the effect of vulnerability on being in arrears on consumer credit payments is weaker for consumers with high PSO. Additionally, we find important effects of other psychological characteristics. For example, the effect of vulnerability on being in arrears on consumer credit payments is weaker for consumers with a high propensity to plan for money. We find similar moderation effects of numeracy on being in arrears on utilities, consumer credit, and rent/mortgage payments. All in all, the results indicate that consumer vulnerability is an important construct to understand the drivers of key financial outcomes, whereas psychological characteristics play an important mediating and moderating role.

Conclusion

The aim of this study was to conduct a nomological examination of consumer vulnerability, by studying its effects on various financial outcomes, examining its correlations with a set of cognitive and non-cognitive psychological characteristics, and testing these characteristics' mediating and moderating role regarding the effect of consumer vulnerability on these financial outcomes. We found that consumer vulnerability is related in meaningful ways to financial outcomes such as having lower savings levels, lower investment levels, and being in arrears regarding utilities, consumer credit, or rent/mortgage. Psychological characteristics such as personal saving orientation and cognitive characteristics such as numeracy are important qualifiers in explaining the effect of vulnerability on financial outcomes, having mediating or moderating effects regarding some of the outcomes. Our study yields initial insights into the kinds of observable psychological mechanisms that may meaningfully vary in accordance with a consumer's level of "vulnerability", which may be helpful to policy makers and other practitioners to identify areas in where at-risk consumers could be assisted.

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