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AMERICAN MARKETING ASSOCIATION

Journal of Marketing Research
2023, Vol. 60(6) 1135-1153

DOI: 10.1177/00222437221146521
journals.sagepub.com/home/mrj
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Helping Those That Hide: Anticipated Stigmatization Drives Concealment and a Destructive Cycle of Debt

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Abstract

Debt accumulation has been linked to materialism, impulsivity, shortsightedness, self-control, and lifestyle preferences. However, applying stigma theory allows novel insights into debt accumulation for middle-class individuals who access a variety of credit-related products. The authors define anticipated stigmatization of debt as the negative judgment and discrimination an individual expects to experience because of their consumer indebtedness. Results from a series of studies demonstrate that although financial stress motivates behaviors designed to reduce debt, debtors who anticipate stigmatization perform a variety of concealment behaviors (secrecy, social spending, and help avoidance) that hinder debt reduction and have negative effects on well-being. To understand how to help these individuals, the authors collaborated with a financial education company, designing a field experiment to examine the efficacy of a behavior change course. Individuals who anticipated stigmatization and formed new social connections in a community-based condition reduced their consumer debt. Although the emotional effect of community-based support has been examined in other stigma contexts, this study is the first to investigate the effect on well-being in a debt context and link social benefits to actual behavior change in terms of debt reduction behaviors and debt repayment.

Keywords

anticipated stigmatization, stigmatization, consumer debt, debt concealment, financial decision making, well-being, field experiment

Online supplement: https://doi.org/10.1177/00222437221146521

Nearly 80% of American families carry consumer debt (Bricker et al. 2017), and the average debt-holding consumer has $38,000 in debt, not including mortgages (Leonhardt 2018). Many consumers are adversely affected by high debt despite the widespread and normalized use of credit. To deal with debt problems and the resulting financial stress, consumers may try to limit their spending and can enlist help from financial and counseling services; however, asking for help means telling someone about one's debt. By contrast, many consumers go to great lengths, as we show, to conceal their consumer debt from others. We argue that these competing motivations (to reduce and to conceal debt) contribute to a destructive cycle that slows debt reduction and decreases well-being. Understanding how debt affects consumer behavior and well-being requires more attention if organizations are to develop practical, effective solutions to help consumers reduce debt. In our work, we develop a theory of consumer debt behavior, test this theory with five tightly controlled studies, and test a behavior change intervention in a field study collaboration with a financial education company.

As there is an extensive literature on consumer debt and its effects, we first highlight what is novel in our work, outlining how our work extends and challenges existing knowledge before going into a more detailed conceptual development. We make contributions in three broad areas: (1) explaining consumer debt accumulation, (2) providing new explanations and interventions for debt reduction, and (3) expanding the investigative scope to include diverse populations and less extreme debt situations (beyond bankruptcy and mortgage foreclosure crises).

First, consumer debt accumulation has been linked to materialism, impulsivity, present bias, self-control, and culture (e.g., Bernthal, Crockett, and Rose 2005; Haws, Bearden, and Nenkov 2012; Meier and Sprenger 2010; Wilcox, Block, and

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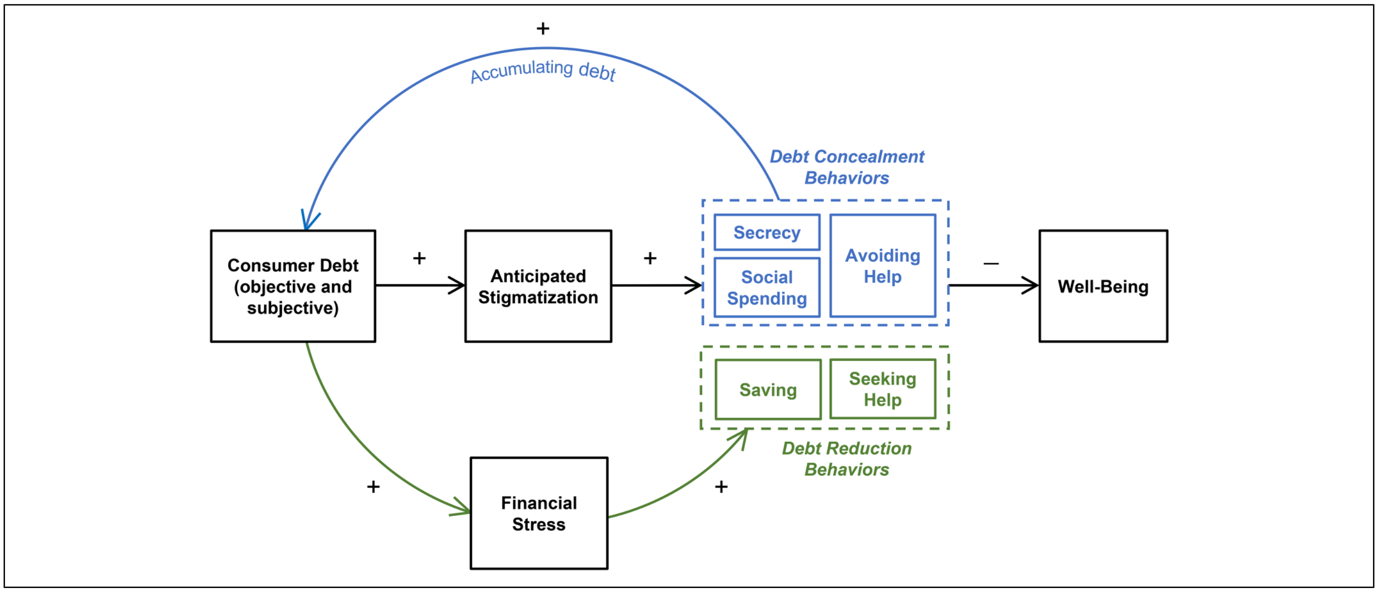

Figure 1. Conceptual Framework: Anticipated Stigmatization Contributes to a Destructive Cycle of Debt and Reduced Well-Being.

Eisenstein 2011). We extend this work by demonstrating that anticipated stigmatization (i.e., the negative judgment and discrimination an individual expects to experience if their debt is revealed) motivates consumers to actively conceal consumer debt from others, contributing to further debt accumulation by increasing poor spending decisions in social situations and decreasing help seeking. Related to our work, in an investigation of shame and financial hardship, Gladstone et al. (2021) observed a relationship between self-stigmatization (i.e., viewing oneself negatively due to financial circumstances) and willingness to disclose to a friend to get financial help. This study provides additional motivation for isolating the effect of anticipated stigmatization on concealment of debt from others, because anticipated stigmatization and self-stigmatization are conceptually distinct, with the former involving imagining the reactions of others to one's debt and the latter involving self-concealment.

Second, our work also includes (but goes beyond) help-seeking to examine actual debt reduction. Debt reduction is often treated like a math problem by financial counselors, who assume that debt can be remedied by teaching consumers about interest rates and compounding (Amar et al. 2011). However, social and motivational factors also influence debt reduction (Dholakia et al. 2016; Gal and McShane 2012). We demonstrate in a field study that there are important social dimensions to effective consumer debt education that go well beyond financial literacy, and we explore the role of stigma in debt reduction.

Finally, prior research has examined consumers on the brink of bankruptcy or close to losing their homes due to mortgage strain (Fay, Hurst, and White 2002; Keene, Cowan, and Baker 2015; Thorne and Anderson 2006) and shown evidence, through qualitative interviews, of anticipated stigma and concealment. Our unique contribution is to demonstrate that the relationship between anticipated stigmatization and debt concealment is evident in a broad, diverse North American population in far more common debt situations, not only extreme situations involving bankruptcy and mortgage default. Specifically, we show how anticipated stigma works in the area of consumer credit debt, where debt is often thought to be more normalized (Peñaloza and Barnhart 2011). Further, unlike situations of bankruptcy or mortgage default, consumer debt can be hidden by increased consumer spending, which contributes to further debt accumulation and anticipated stigmatization.

Conceptual Development

A visualization of our theory is in Figure 1. We argue that consumers can become trapped in a destructive cycle of increasing debt and reduced well-being. Debt negatively affects well-being in many ways, including by increasing financial stress (Bridges and Disney 2010; Netemeyer et al. 2018). However, financial stress can have positive effects by motivating consumers to change their financial behavior (Fiksenbaum, Marjanovic, and Greenglass 2017). Thus, financial stress may contribute to behaviors that help consumers reduce debt. Although consumers who experience financial stress suffer from lower well-being and may be motivated to reduce their debt, they may also anticipate being stigmatized and therefore may conceal their debt through consumption behaviors that further increase debt and reduce well-being. These competing motives (to reduce debt and to conceal debt) contribute to a destructive cycle for consumers who anticipate debt-related stigmatization (see Figure 1).

A stigma is a mark signaling that one has a negative characteristic and is blemished, failed, abnormal, or shameful (Goffman 1963; Lang and Rosenberg 2017; Major and

O'Brien 2005). There is an extensive literature on the stigmatization of mental illness, physical illness, physical differences, and addiction (e.g., Fife and Wright 2000; Lang and Rosenberg 2017; Lawrence et al. 2010; Moisio and Beruchashvili 2010). There is also research on stigma in marketing and consumption domains (e.g., Argo and Main 2008; Chaney, Sanchez, and Maimon 2019; Harmeling et al. 2021; Meyer et al. 2020; Mirabito et al. 2016) and research in the financial area (Chin, Cohen, and Lindblad 2019; Efrat 2006; Gathergood 2012; Gladstone et al. 2021; Henry, Garbarino, and Voola 2013; Keene, Cowan, and Baker 2015). Stigmatization is the devaluation of an individual who is believed to possess a stigma and may be experienced as negative evaluations, negative emotional reactions, exclusion, teasing, loss of status and opportunities, undesirable labeling, and/or discrimination (Crocker, Major, and Steele 1998; Crockett 2017; Major and O'Brien 2005). Individuals with a perceived stigma may directly experience stigmatization, and they may also anticipate stigmatization, which is a recognition of "the looming possibility of prejudice and discrimination" (Harvey 2001, p. 176).

Stigmas may be visible to others (e.g., race, visible physical disabilities, obesity) or concealable (e.g., addictions, diseases, sexual orientation). Concealable stigmas are conditions that carry social devaluation but can be hidden (Quinn and Chaudoir 2009). As with visible stigmas, individuals with concealable stigmas, such as high levels of debt, may anticipate stigmatization. Although there is some research showing that debt has become less stigmatized in the United States (Peñaloza and Barnhart 2011), we argue that anticipated stigmatization from others is still a potent force acting on consumers. Even if an individual may not have personally experienced stigmatization, the possibility of stigmatization can feel real.

We posit that anticipated stigmatization of debt is a relatively stable perception based on a consumer's feelings about how debt is perceived by others and society in general, and it may also be influenced by past experiences with stigmatization and the extent of debt accumulated. Because stigmas are socially constructed (Link and Phelan 2001), individuals vary in how strongly they anticipate stigmatization. Although many consumers consider credit and debt normal for middle-class consumers, this is not true for everyone (Bernthal, Crockett, and Rose 2005). For many people, their debt is shameful, they do not feel that their debt is normal, and they worry that they will be stigmatized for it (Bernthal, Crockett, and Rose 2005; Gathergood 2012; Gladstone et al. 2021; Hayes 2000; Keene, Cowan, and Baker 2015; Thorne and Anderson 2006).

There is evidence that some indebted individuals anticipate stigmatization. As mentioned, Keene, Cowan, and Baker (2015) qualitatively uncover links between anticipated stigmatization, concealment, and emotional distress among a group of African American first-time homeowners with heavy mortgage debt; they call for more research on broader populations. Our work answers that call and tests these ideas experimentally. Because credit card debt (our context) is often seen as more irresponsible than homeownership debt (Kalousova and Burgard 2013), there may be an even stronger link from consumer debt to anticipated stigmatization or the negative judgment and discrimination an individual expects to experience if their consumer debt is revealed. Thus:

> **H_1:** Consumer debt is positively related to anticipated stigmatization.

We argue that anticipated stigmatization is especially critical for concealable stigmas such as consumer debt because it leads to concealment behaviors to prevent others from discovering the stigma. As we show, these concealment behaviors lead to both an increase in consumer debt (the destructive cycle denoted by the recursive arrow in Figure 1) and a direct reduction in well-being. While other researchers have shown connections between mortgage debt and psychological health (Gathergood 2012), we investigate less laudable debt than mortgages, namely credit card debt, and thus our work both supports and expands on this prior research.

For concealable stigmas, in general, anticipated stigmatization is associated with heightened concerns about a stigma being discovered (Quinn and Chaudoir 2009). Concealment is an active attempt to prevent disclosure of negative information in social situations and is assumed to be one way of coping with anticipated stigmatization (Cook, Germano, and Stadler 2016; Link et al. 1997). Concealment may be accomplished through a variety of behaviors including secrecy, which is withholding information or lying to prevent others from finding out about the stigma (Link et al. 1997; Thomas and Jewell 2019). Thus:

> **H_{2a}:** Anticipated stigmatization leads to debt concealment through increased secrecy.

A novel aspect of our theory, unique to the consumer debt context, is that concealment may involve increased spending in social situations. Intuitively, financial stress likely leads indebted individuals to reduce spending to bring financial issues under control. However, for debtors who anticipate stigmatization and are unable or unwilling to avoid social situations that involve spending, spending helps conceal debt by creating the impression of financial health. Spending-based concealment also enables debtors to avoid questions that could lead to discovery of their debt. This behavior is unique to the debt context compared with other stigmas because, for example, publicly gambling more or smoking more does not enable concealment. Whereas spending more in social situations enables concealment (in the short term), it leads to further debt accumulation in the destructive cycle shown in Figure 1. Thus, we argue:

> **H_{2b}:** Anticipated stigmatization leads to debt concealment through increased spending in social situations (i.e., social spending).

Consumers under financial stress often seek out financial help and social support from personal or professional sources to

Table 1. Overview of Studies, Hypotheses, Measures, and Samples.

Study	Hypotheses Tested	Concealment Measure	Participants
1	H_1: Consumer debt → Anticipated stigmatization H_{2a}: Anticipated stigmatization → Concealment H_3: Concealment → Well-being	Debt secrecy (five items)	Prolific Academic
2	H_1: Consumer debt → Anticipated stigmatization H_{2b}: Anticipated stigmatization → Concealment	Social spending (agree to split a restaurant bill evenly and thus pay more than fair share)	Prolific Academic
3	H_1: Consumer debt → Anticipated stigmatization H_{2c}: Anticipated stigmatization → Concealment	Help avoidance (negative relationship with the time allocated to a discussion about how to manage debt)	Student participant pool
4	H_1: Consumer debt → Anticipated stigmatization H_{2c}: Anticipated stigmatization → Concealment	Help avoidance (negative relationship with providing email address to sign up for debt education course)	University staff members
5	H_{2c}: Anticipated stigmatization → Concealment	Help avoidance (years delayed before seeking help for debt)	Clients signed up/waitlisted for debt education course
6	Intervention to improve consumers' outcomes for well-being and debt reduction (H_1, H_{2a}, and H_3 were also tested)		Clients enrolled in debt education course
Web Appendix D	H_{2b}: Anticipated stigmatization → Concealment	Social spending (financial donation to support a peer networking event)	Student participant pool
Web Appendix E	H_{2a}: Anticipated stigmatization → Concealment H_{2b}: Anticipated stigmatization → Concealment	Social spending (accept invite to paid lunch with coworkers) Debt secrecy (those who declined invitation: secrecy is the reason for declining)	Prolific Academic

Notes: All hypotheses are supported except Study 6, H_1.

reduce their debt. However, individuals who anticipate stigmatization may conceal their debt by avoiding help because it invites social criticism or rejection (Hayes 2000; Overstreet and Quinn 2013). Indeed, stigmatization hinders help seeking, as shown across a variety of settings including health services and gambling (e.g., Clement et al. 2015; Tavares et al. 2002). With finances and debt, feelings of shame and embarrassment, which are related to stigma, also contribute to avoiding help (Andelic, Stevenson, and Feeney 2019; Gladstone et al. 2021). In the short term, help avoidance can limit stigmatization but contribute to continued debt accumulation because individuals miss the opportunity to receive critical support for debt reduction. Acknowledging prior work, it is still important to test this part of our theory to show how the competing effects of financial stress and anticipated stigmatization on debt reduction and concealment contribute to the recursive cycle. Thus:

> **H_{2c}:** Anticipated stigmatization leads to debt concealment through help avoidance.

Debt concealment requires considerable effort. As with other concealable stigmas, in social situations, individuals must continually scan for clues that someone suspects their debt (Smart and Wegner 2003) and actively guide social interactions to keep the debt from being discovered (Pachankis 2007). This process exerts a mental and emotional toll that can lead to anxiousness and distress (Larson and Chastain 1990; Major and Gramzow 1999). Ultimately, some consumers with concealable stigmas may find themselves lacking social support and experiencing loneliness, isolation, shame, and a decline of well-being (Frable, Platt, and Hoey 1998; Hatzenbuehler, Nolen-Hoeksema, and Dovidio 2009; Link et al. 1997). Thus:

> **H_3:** Debt concealment behaviors are negatively related to well-being.

In summary, we predict that consumer debt is positively related to anticipated stigmatization, which leads to debt concealment behaviors; these behaviors, in turn, negatively influence well-being and recursively cause further debt accumulation.

Overview of Studies

We test our ideas with six studies (see Table 1). Five studies test the theory outlined in Figure 1, whereas Study 6 is an intervention designed to break the cycle of debt and reduced well-being. Study 1 demonstrates the links between debt, anticipated stigmatization, concealment through debt secrecy, and well-being. Study 2 explores the effect of anticipated stigmatization on concealment through social spending and on debt accumulation. Studies 3, 4, and 5 explore the effect of anticipated stigmatization on concealment through help avoidance, which has detrimental effects on social support and, ultimately, hinders debt reduction. After empirically testing the theory outlined in

Figure 1, in Study 6 we designed an intervention that tests how social connection and debt disclosure in a community-based behavior change course can improve well-being, encourage responsible behaviors, and reduce debt. We collaborated with a financial education company to conduct a field experiment oriented toward actual behavior change and debt reduction, with a curriculum that can be deployed on a broader scale beyond study settings.

We need to clarify that our work is about consumers in debt, not consumers who are experiencing poverty. We distinguish the anticipated stigmatization of debt from a fear of stigmatization for being in financial poverty. To avoid confounds, we limited participation in our studies to consumers with incomes above $25,000, which represents the U.S. poverty threshold for a four-person household (U.S. Department of Health and Human Services 2019). The median household income across our six studies is approximately $85,000,[1] which is higher than the median income in the United States (Semega et al. 2020). For Study 1, we asked participants to indicate their subjective income bracket. Most participants (73%) felt they were middle income compared with 18% lower income and 8% upper income (1% did not respond). The participants in our six studies have a range of occupations including teachers, lawyers, firefighters, homemakers, and executives. The average consumer debt across our studies is approximately $25,700, which is slightly above the U.S. average (Wendel 2020). All participants have at least $1,000 of estimated debt, not including mortgages.

Study 1

In Study 1, we establish the overall relationship between consumer debt, anticipated stigmatization, and well-being, as we test hypotheses H_1, H_{2a}, and H_3. We also distinguish anticipated stigmatization of debt from financial stress and from related stigma constructs.

Method

We recruited 352 participants via the Prolific online research panel. Nineteen participants (5.4%) failed an attention check and were excluded, for a final sample of 333 participants (167 women, 166 men; $M_{age} = 36.4$ years; $M_{debt} = \$28,638$).[2] We developed a five-item measure of anticipated stigmatization specific to debt (1 = " strongly disagree," and 7 = "strongly agree") by adapting from prior stigmatization research on mental illness, weight, and sexual orientation (e.g., Quinn and Chaudoir 2009; Wahl 1999): "I'm concerned that if people knew about my financial situation, they would disapprove of me"; "Because of my financial situation, I worry about what others will think about me"; "People would have a negative attitude toward me if they knew about my consumer debt"; "People would treat me differently during social interactions if they were aware of my debt"; and "People would not think I am capable of managing my own money wisely." Items loaded onto one factor (80% of variance explained). The measure had good inter-item reliability ($\alpha = .94$). In comparison to extant research, which often measures anticipated stigmatization as perceived stigma or asks participants to think about how others might be stigmatized, our measure was direct, self-focused, and specific to debt.

We define "consumer debt" as all liabilities, not including mortgages, that a person must repay (with or without interest), such as credit cards, home lines of credit, retirement savings loans, car financing, student loans, overdraft, and loans from family or friends. We assess the actual debt amount and the person's perception of their indebtedness. Objective consumer debt was measured in intervals (e.g., "at least $1,000 but less than $5,000"). Each interval was converted to its midpoint for a continuous estimate of debt (in thousand dollars). We measured subjective consumer debt by asking the participants to rate their feelings about the size of their debt (1 = "extremely small amount of debt," and 100 = "extremely large amount of debt").

For debt secrecy, participants indicated their agreement with five statements: "I keep my consumer debt a secret," "I do not discuss my debt with friends," "I do not discuss my debt with family members," "I feel like I can be open about my financial situation with others (RC)," and "I feel like I can be transparent about my experience with debt (RC)" (1 = "strongly disagree," and 7 = "strongly agree"; $\alpha = .84$; 61.5% of variance explained).[3]

Financial stress was measured using a scale for current money management stress, which is "feelings of being stressed/ worried about one's current financial situation and being unable to manage money effectively today to meet financial obligations" (Netemeyer et al. 2018, p. 4). The five-item scale ($\alpha = .86$) includes items such as "I am behind with my finances" and "My finances control my life" (1 = "does not describe me at all," and 5 = "describes me completely"). The well-being measure was motivated by prior research (e.g., Baumeister et al. 2013; Diener et al. 1985). Participants indicated their agreement with four items: "I am satisfied about everything in my life," "Life is rewarding," "I experience joy," and "I have a sense of meaning and purpose in my life" (1 = "strongly disagree," and 7 = "strongly agree"; $\alpha = .88$; 74.9% of variance explained).

We measured age, gender, education level, and household income because they are theoretically related to well-being. We used them as control variables in our analyses to provide a stricter test of our predictions (Netemeyer et al. 2018).

[1] Our studies included participants from the United States and Canada. We converted Canadian incomes and debt levels to U.S. dollars at an exchange rate of .80 to compute the means.

[2] In all studies where we removed observations, we ran our analyses both with and without removing the failed attention checks, and there were no significant or meaningful differences in the results.

[3] We developed this measure in consultation with the financial education company in Studies 5 and 6.

Table 2. Summary Statistics and Correlations for Study 1.

	Coeff. α	Mean	SD	Correlation with Anticipated Stigmatization
Anticipated stigmatization	.94	3.02	1.64	
Debt secrecy	.84	3.74	1.41	.55**
Financial stress	.86	2.67	1.02	.59**
Well-being	.88	5.01	1.30	−.29**
Age in years		36.35	11.28	−.15**
Gender (0 = male, 1 = female)		.50	.50	.02
Highest education (seven-point scale)		4.63	1.20	−.02
Est. household income (thousand $)		81.22	45.16	−.07
Est. consumer debt (thousand $)		28.64	37.29	.31**

**$p < .01$.

Summary statistics are in Table 2. To establish convergent and discriminant validity with anticipated stigmatization, we also measured related constructs (e.g., self-efficacy and self-consciousness) (Chen, Goully, and Eden 2001; Scheier and Carver 1985). We also confirmed the discriminant validity of anticipated stigmatization from our proposed mediator: debt secrecy (for results, see Web Appendix A).

Results and Discussion

We first tested the relationship between consumer debt and anticipated stigmatization, controlling for age, gender, education, and income. Supporting H_1, the estimated dollar amount of debt was positively related to anticipated stigmatization ($\beta = .015$, $SE = .002$, $p < .001$). This means that for a $100,000 increase in consumer debt, responses are 1.5 points higher on the seven-point anticipated stigmatization scale. Age was the only significant covariate ($\beta = -.02$, $SE = .01$, $p = .011$): younger consumers experience higher levels of anticipated stigmatization. In a similar analysis predicting financial stress, debt was positively related to financial stress ($\beta = .005$, $SE = .001$, $p < .001$), whereas income was negatively related ($\beta = -.006$, $SE = .001$, $p < .001$).

Although our core concern was not determining which indebted consumers are more likely to experience anticipated stigmatization or financial stress, we nonetheless performed analyses for nomological validity (for details, see Web Appendix B). Our findings revealed an important relationship: a consumer's subjective feeling about the size of their debt (1 = "extremely small amount," and 100 = "extremely large amount") may be a more important predictor of both anticipated stigmatization and financial stress than the actual size of the debt in dollars. Further, as we might expect based on extant stigmatization literature, consumers who anticipate stigmatization are less likely to say that others would view their debt as "normal."

Next, we tested the relationship between anticipated stigmatization and well-being, controlling for financial stress, age, gender, education, and income. Supporting extant research (e.g., Netemeyer et al. 2018), financial stress was negatively related to well-being ($\beta = -.51$, $SE = .08$, $p < .001$). As expected, anticipated stigmatization was also negatively related to well-being ($\beta = -.09$, $SE = .05$, $p = .067$). Because the survey was cross-sectional, we cannot confidently establish causality between anticipated stigmatization and well-being. To address this endogeneity problem, we performed two-stage least squares regressions using an instrumental variable, which offers some support for a causal relationship (for results, see Web Appendix C).

Our theory predicts that anticipated stigmatization affects well-being through concealment behaviors (H_2 and H_3). Thus, we conducted a mediation analysis with PROCESS Model 4 (Hayes 2017). Debt secrecy was our measure of concealment for this analysis, and financial stress was a covariate. Consistent with extant literature, financial stress had a negative direct effect on well-being ($\beta = -.52$, 95% CI: [−.67, −.37]) and, as expected, was not related to concealment by debt secrecy ($\beta = -.02$, 95% CI: [−.18, .13]). In support of H_{2a}, anticipated stigmatization was positively related to concealment by debt secrecy ($\beta = .48$, 95% CI: [.38, .58]). In support of H_3, debt secrecy negatively affected well-being ($\beta = -.21$, 95% CI: [−.31, −.10]). Finally, as predicted by the process in H_2 and H_3, there was a significant indirect effect of anticipated stigmatization on well-being through debt secrecy ($\beta_{indirect} = -.10$, 95% CI: [−.15, −.05]). This suggests that anticipated stigmatization leads to secrecy-based concealment, which, in turn, reduces well-being.

Study 2

In Study 1, we found that consumer debt is related to anticipated stigmatization, and individuals who anticipate stigmatization conceal their debt by being more secretive, with detrimental effects on well-being. In Study 2, we explore another form of concealment: social spending (H_{2b}). Participants responded to a scenario that involved a spending decision in a social setting with a variety of peer groups. We tested whether individuals who anticipate stigmatization will spend more money to conceal their debt and whether this relationship will generalize across situations involving different social groups.

Method

We recruited 221 participants through Prolific. Five participants (2.3%) failed an attention check and were excluded from our final sample of 216 (108 women, 102 men, 6 nonbinary; M_{age} = 35.1 years; M_{debt} = $24,977). Participants read a scenario that described a social dinner and were randomly assigned to one of three groups; they were invited to go to a restaurant with friends, with coworkers, or with their boss and coworkers. To help participants imagine the experience, they identified which friends (or coworkers or boss and coworkers) would join them at the restaurant and provided names. Participants then read the following about their experience:

> The dinner goes very well. You notice that your friends (*co-workers/boss and co-workers*) order an appetizer, a large entrée meal, and drink. However, you're feeling concerned about money and **really struggling with debt**, so you decide to order a tossed salad and some water to keep the cost down.
>
> The food is good, and you have great conversation with your friends (*co-workers/boss and co-workers*). At the end of the meal, your server arrives at your table and asks about the bill. One of your friends (*one of your co-workers/your boss*) says "Let's make this quick and easy. Let's just split the bill evenly." You need to decide whether you will agree to split the bill evenly (so that everyone pays the same amount) or whether you would like to pay separately so that each person pays for their own orders.
>
> What do you say to your friends (*co-workers/boss and co-workers*)? Please write your response in the box below.

Next, participants indicated whether they agreed to split the bill evenly (yes/no). Splitting the bill evenly means that participants pay more than their fair share, and this item served as our dependent variable for concealment through social spending. Participants who split the bill (N = 50) were then asked two questions to determine if a desire to conceal debt was the reason for their decision: "I made this decision because I do not want my friends (*co-workers/boss and co-workers*) to find out about my debt" and "I made this decision because I want to keep my friends (*co-workers/boss and co-workers*) from learning about my debt" (1 = "strongly disagree," and 7 = "strongly agree"). These items were combined into a measure of concealment motives (r = .97). Participants next indicated their objective debt, subjective debt, anticipated stigmatization, and financial stress.[4] Last, age, gender, and income were measured for use as covariates.

Results and Discussion

We first tested the relationship between debt and anticipated stigmatization (H_1), controlling for age, gender, and income. Although the estimated debt in thousand dollars was not

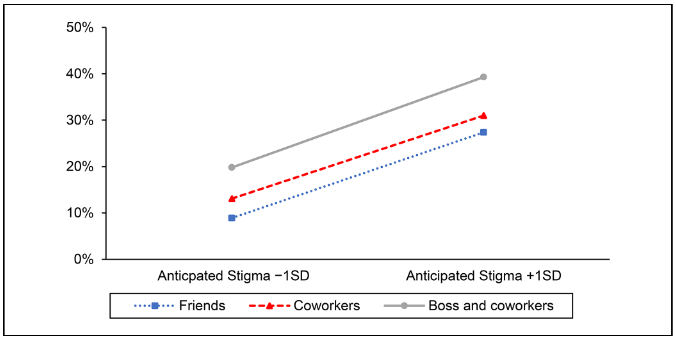

Figure 2. Effect of Anticipated Stigmatization on Splitting the Bill Evenly (Social Spending).

significantly related to anticipated stigmatization (β = .005, SE = .003, p = .16), subjective debt had a positive relationship with anticipated stigmatization (β = .014, SE = .004, p < .001). Both estimated (β = .005, SE = .002, p = .013) and subjective debt were related to financial stress (β = .015, SE = .002, p < .001).

Next, we performed a logistic regression to determine the effect of anticipated stigmatization on concealment through social spending, controlling for financial stress. Social spending was measured by the likelihood of agreeing to split the bill evenly with peers. We expected that financial stress would be negatively related to splitting the bill because consumers feeling stress would be motivated to save money to reduce debt. Interestingly, there was no relationship in this study (β = −.03, SE = .19, p = .86). However, in support of H_{2b}, anticipated stigmatization was positively related to splitting the bill (β = .37, SE = .13, p = .003). The more that an individual anticipated that they would be stigmatized for their debt, the more likely they were to split the bill evenly (social spending). These individuals pay more than their fair share for the meal, which contributes to further debt accumulation. Next, we assessed whether concealment motives were linked to a participant's decision to split the bill. As expected, anticipated stigmatization was positively related to concealment motives (β = .46, SE = .14, p < .001). That is, splitting the bill evenly is a form of concealment for individuals who anticipate stigmatization.

We next compared the effect of anticipated stigmatization on social spending among friends versus coworkers versus boss and coworkers to test if the relationship generalized or differed across the groups. We performed a moderation analysis (PROCESS Model 1): anticipated stigmatization was the predictor, social group was a multicategorical moderator (the friend condition was the reference category), splitting the bill (yes/no) was the dependent variable, and financial stress was a covariate. There was no significant difference in the effect of anticipated stigmatization on splitting the bill in the friend condition compared with the coworker (β = −.08, SE = .28, p = .76) or boss and coworker (β = −.13, SE = .27, p = .64) conditions. Thus, anticipated stigmatization leads to concealment through social spending, allowing individuals to hide debt indiscriminately from their friends, coworkers, or boss (see

[4] In this study and Studies 3 and 4, these measures were administered after the scenario to mitigate demand effects and minimize participants who anticipate stigmatization from dropping out of the study before the dependent variable was assessed. Further, as discussed previously, we see anticipated stigmatization as a relatively stable perception, because it is based on consumers' feelings about how debt is perceived by others and society, in general, but it is also influenced by past experiences with stigmatization and consumer debt (objective and subjective), as shown in Figure 1.

Figure 2). Although we did not find differences in the effect of anticipated stigmatization across the three conditions, it is conceivable that the consequences of debt being discovered may depend on who is present in the social spending situation. A deeper and more rigorous investigation of these social dynamics is worth pursuing in future research.

The results of this study show a positive relationship between anticipated stigmatization and concealment through social spending (H_{2b}). We expected that financial stress would have the opposite effect by reducing spending, because individuals may be concerned with increasing their debt. The lack of a relationship between financial stress and spending may be attributed to the study's scenario-based design; the scenario may have been ineffective in conjuring financial strain.[5] However, anticipated stigmatization is relevant for the study because the scenario was social; participants were asked to name their dinner companions and then imagine and write what they would actually say to their companions if they declined to split the bill. These social aspects and the potential for concealment are important for anticipated stigmatization but not for financial stress. Eliciting financial stress would likely require an actual spending decision. In Web Appendix D, we describe a separate study in which participants believed they were making an actual financial contribution either in a social setting or in private. We found that financial stress reduces spending ($\beta = -.93$, 95% CI: [−1.86, −.004]), and individuals who anticipate stigmatization increase spending in the presence of a peer ($\beta = 1.60$, 95% CI: [.41, 2.79]) but not in private ($\beta = -.13$, 95% CI: [−1.43, 1.18]; for more details, see Web Appendix D).

Study 3

In Study 2, we found that anticipated stigmatization leads to concealment through social spending, which can contribute to further debt accumulation. In the next three studies, we tested H_{2c} with another form of concealment: help avoidance. In Study 3, we tested whether anticipated stigmatization causes individuals to avoid an important conversation with peers designed to help the individual learn how to manage debt. Further, we attempted to manipulate the perceived likelihood of debt discovery (i.e., threat of discovery; Pachankis 2007) to determine if it is possible to strengthen the effects of anticipated stigmatization on concealment. Threat of discovery has been theorized to influence behavior related to managing the effects of stigmatization. Specifically, creating a general model of stigma concealment, Pachankis (2007) hypothesized that elevated threat would increase impression management. Thus, we expected that elevating the threat of discovery would increase concealment through help avoidance.

Method

We recruited 148 undergraduate students for course credit from a large North American university. Six students (4.1%) were removed because they heard about the study from previous participants. Participants ($N = 142$; 54 women, 87 men, 1 nonbinary; $M_{age} = 18.89$ years; $M_{debt} = \$10,078$) were randomly assigned to one of two conditions (threat of debt discovery: lower, where they would talk about debt in general/higher, where they would specifically talk about their personal debt). Participants were recruited under the guise that they were in a two-part study investigating the lived experiences of university students on a variety of topics. Participants were told that in the first part, they would select the conversation topics for the second part of the study, where they would ostensibly participate in a 35-minute conversation with a research assistant and peers (other students) on the selected topics. In reality, part two of the study was not conducted.

Participants first allocated their 35 minutes across three topics designed to increase effectiveness in each respective domain: study habits, managing debt, and social media usage habits. Each topic was described so that the participant could understand what they would be discussing and learning (for the stimuli, see Web Appendix F). We considered the amount of time allocated to the topic of "managing debt" as indicative of help seeking, because it shows that students want to learn how to better manage their debt; thus, a negative relationship between anticipated stigmatization and conversation time allocated to the debt topic would be consistent with concealment through help avoidance. After allocating time to their preferred conversation topics, participants shared their objective debt, perceptions of subjective debt, anticipated stigmatization, and financial stress (as in Study 2). Age, gender, and family income were measured for use as covariates, followed by a manipulation check for threat of discovery: "One of the potential conversation topics was called 'Managing Debt'. If you were to choose this topic for part of your 35-minute discussion, the likelihood of the research assistant and other students finding out about your personal debt is (1 = highly unlikely; 7 = highly likely)."

We expected that individuals who anticipate stigmatization would allocate less time to discussing debt management, preventing the possibility of their debt being discovered by their peers. We also expected that threat of discovery would moderate this relationship such that high threat would elevate concealment. Unfortunately, our threat manipulation was not successful. Participants believed that their debt was equally likely to be discovered in the lower and higher threat conditions ($M_{lower} = 3.91$, $M_{higher} = 3.81$; $F(1, 140) = .14$, $p = .71$). Thus, we collapsed these two conditions. However, this study is still a powerful test of our main theory that debt increases anticipated stigmatization, which leads to concealment (help avoidance).

Results and Discussion

As in Study 2, the estimated debt in thousand dollars was not significantly related to anticipated stigmatization ($\beta = .002$,

[5] In a separate scenario-based study, we found a similar result. Anticipated stigmatization leads to social spending in the form of accepting an invitation from coworkers to purchase lunch together rather than eating a free lunch provided by the employer, but financial stress was not related to the lunch decision (see Web Appendix E).

SE = .006 $p = .74$), but the subjective size of debt had a positive relationship with anticipated stigmatization (β = .010, SE = .004, $p = .01$), supporting H_1. Similarly, subjective debt was also related to financial stress (β = .011, SE = .002, $p < .001$), whereas estimated debt did not have a significant relationship (β = .005, SE = .004, $p = .20$).

Next, we tested the relationship between anticipated stigmatization and the amount of time allocated to the "managing debt" topic, controlling for financial stress. In support of H_{2c}, anticipated stigmatization was negatively related to the time allocated to talking about debt, demonstrating concealment through help avoidance (β = −.82, SE = .42, $p = .053$). As expected, financial stress had the opposite effect (i.e., help seeking); the effect of financial stress on time spent talking about debt was positive and significant (β = 1.80, SE = .67, $p = .008$). Together, these results suggest that a debtor may have competing goals. Financial stress causes individuals to seek help for debt reduction; however, if they also anticipate stigmatization, then they may avoid help to conceal their debt. This debt concealment may have the detrimental effect of contributing to continued debt accumulation, because individuals do not seek the help that may improve their financial situation. We explore this relationship further in Study 4 with a different measure of concealment through help avoidance.

Study 4

In Study 4, we continued testing the effect of anticipated stigmatization on concealment through help avoidance (H_{2c}) in a situation that gives participants access to a free debt education workshop. We tested whether anticipated stigmatization decreases registration (help avoidance) and if financial stress simultaneously increases registration (help seeking).

Method

We recruited 208 staff members of a large North American university (124 women, 80 men, 2 nonbinary; $M_{age} = 37.2$ years; $M_{debt} = \$21,890$) through a mass email under the guise of offering the opportunity to enroll in a free debt education workshop. Participants read about the workshop and could provide their email address if they wanted to receive an enrollment invitation with registration details. The decision to provide an email to register for the debt course is a form of help seeking; thus, a negative relationship between anticipated stigmatization and providing an email for registration would be consistent with concealment through help avoidance.

The description of the workshop differed across conditions to mirror some of the main delivery formats for debt education that are available in the marketplace, including asynchronous online delivery, private one-on-one sessions with an instructor, and community-based instruction with a group of peers. We wanted to test the effect of anticipated stigmatization on concealment in these real-world educational formats and whether the social presence of peers, who would likely become aware of a participant's debt during the workshop, differentially matters.

In the asynchronous (peers absent) condition, participants read that the workshop consisted of four recorded one-hour classes to be watched online. In the private (peers absent) condition, the workshop consisted of four one-hour classes involving the participant and a financial education instructor over Zoom in a live one-on-one format. The community-based (peers present) condition was the same as the private condition except the Zoom classes included a group of other staff members enrolled in the workshop in addition to the instructor. We included a fourth condition (supportive community, peers present) to explore if it was possible to reduce concealment by prompting individuals to feel that the social environment was safer and more inclusive. This condition was the same as the community-based condition except the course was described as supportive (e.g., "a judgment-free and safe learning environment," "supported by others in the class who may be experiencing similar financial circumstances"; for the stimuli, see Web Appendix G).

We expected that anticipated stigmatization would be negatively related to providing an email for registration (i.e., concealment through help avoidance). We further predicted that this relationship would be stronger when peers are present in the workshop, because we expected that participants who anticipate stigmatization should feel that the consequences of their debt being discovered by peers is more severe than the consequences of debt disclosure to an instructor. To compare the consequences of debt discovery, we asked participants to indicate their agreement with the following: "It could be bad for me if the workshop instructor (*other staff members in the workshop*) find out about my debt" (1 = "strongly disagree," and 7 = "strongly agree"). We also measured participants' objective debt, perceived subjective size of debt, age, gender, and income.

Results and Discussion

We first tested the relationship between debt and anticipated stigmatization (H_1), controlling for age, gender, and income. Estimated debt in thousand dollars was not significantly related to anticipated stigmatization (β = .006, SE = .004, $p = .12$), but subjective debt had a positive relationship with anticipated stigmatization (β = .020, SE = .005, $p < .001$). Similarly, estimated debt was not related to financial stress (β = .003, SE = .002, $p = .14$), but subjective debt had a positive relationship with financial stress (β = .016, SE = .003, $p < .001$).

Next, we performed a logistic regression to determine the effect of anticipated stigmatization on the likelihood of providing an email for workshop enrollment, controlling for financial stress. Once again, we have strong support for our main theory: supporting H_{2c}, anticipated stigmatization was negatively related to providing an email address, demonstrating concealment through help avoidance (β = −.26, SE = .12, $p = .026$). The more an individual anticipated that they would be stigmatized for their debt, the less likely they were to provide an email address to enroll in the workshop. Financial stress had the opposite effect: the effect of financial stress on providing an email (i.e., help seeking) was positive and significant ($\beta = 1.02$, $SE = .22$, $p < .001$). Thus, financial stress causes individuals to be more likely to seek debt reduction help; however, if they also anticipate stigmatization, then consumers may avoid enrolling in the debt education course to conceal their debt.

Next, as expected, anticipated stigmatization was positively related to perceived consequences of debt discovery by peers ($\beta = .54$, $SE = .08$, $p < .001$) and the workshop instructor ($\beta = .46$, $SE = .06$, $p < .001$), such that individuals who anticipate stigmatization believe that the consequences of their debt being discovered are more severe. In general (i.e., means averaged across conditions), participants believed that the consequences of disclosing debt to peers ($M = 4.04$) would be more severe than disclosing debt to the instructor ($M = 2.50$). Interestingly, the consequences of peers finding out about one's debt did not differ between the community-based ($M = 3.83$) and the supportive community ($M = 4.27$; $F(1, 89) = 1.13$, $p = .29$) conditions. This suggests that our efforts to position the community course as extremely supportive did not assuage the strong fears of individuals who anticipated stigmatization. To further explore if the social presence of peers (and the potential stigmatization by peers) differentially affects the relationship between anticipated stigmatization and concealment, we conducted a moderation analysis by collapsing the four conditions into a two-factor moderator (peers present/peers absent). Although the results were directionally as we predicted, there was no significant interaction between anticipated stigmatization and whether peers are present on the likelihood of providing an email/signing up for the course ($\beta = -.10$, $SE = .21$, $p = .62$). There were also no significant differences between any of the four conditions (ps $> .50$). However, our main effect—that debt leads to anticipated stigmatization and then to concealment—was once again strongly supported in a different, realistic, and consequential choice situation.

Study 5

Next, we tested H_{2c} with a sample of indebted individuals who signed up for a real debt education course. We operationalized concealment through help avoidance by measuring how long help is delayed, and we tested the effects of anticipated stigmatization and financial stress.

Method

We collaborated with a company experienced in providing education to indebted individuals. We administered a survey to 74 new clients (48 women, 26 men; $M_{age} = 39.6$ years; $M_{debt} = \$31,100$) who signed up for, but had not yet begun, a debt education course with the company. We asked participants to tell us how long (in years) it had been since they first recognized that they had a debt issue and the first time that they sought external help (through this company or elsewhere). We expected that individuals who anticipated stigmatization would wait longer before seeking help (i.e., concealment through help avoidance).

To further strengthen our argument that help avoidance is an act of concealment and anticipated stigmatization increases this concealment behavior, we asked participants to identify the reasons they did not seek help sooner. We adapted the Reasons for Delaying Treatment scale from Tavares et al. (2002) to our debt context and asked participants, "After you first realized that you had a problem managing your debt, which of the following describes what may have kept you from seeking help earlier?" Participants responded to 11 items (adapted from Tavares et al. [2002]) related to concealment motives (e.g., "I didn't want my debt problems to become public"), lack of practical resources (e.g., "I didn't have the money to pay for a course like this"), readiness for change (e.g., "I thought that a course like this would require more effort than I wanted to give"), and trying to solve the issue on my own (e.g., "I was trying to take care of my debt problem by myself"). We included an additional item: "I wasn't aware that courses like this were available in my area." Participants also responded to our anticipated stigmatization and financial stress measures and provided a direct estimate of their total consumer debt.

Results and Discussion

We tested the relationship between anticipated stigmatization and concealment through help avoidance, controlling for financial stress. In support of H_{2c}, debtors who anticipate stigmatization wait longer before seeking help ($\beta = 1.30$, $SE = .58$, $p = .029$). Each point on the seven-point anticipated stigmatization scale is associated with delaying help by 1.3 additional years. Financial stress was not related to delaying help ($\beta = -.47$, $SE = .61$, $p = .44$), which is likely because our measure of financial stress is present-focused. The average time that participants waited to seek help was 5.65 years; an individual's current feelings of financial stress may not be how they felt 5 years earlier. However, recall that anticipated stigmatization is a more stable construct influenced by not only consumer debt but also feelings about how debt is perceived by others and society, as well as previous experiences with stigmatization.

Next, consistent with Tavares et al. (2002), we created five factors representing reasons for delaying treatment. Anticipated stigmatization was related to trying to solve the issue on one's own ($\beta = .18$, $SE = .08$, $p < .029$) and concealment motives ($\beta = .41$, $SE = .10$, $p < .001$), which further supports our characterization of help avoidance as a concealment behavior. Anticipated stigmatization was not related to lack of resources ($\beta = .07$, $SE = .07$, $p = .30$), readiness for change ($\beta = .10$, $SE = .09$, $p = .26$), or awareness of courses in one's area ($\beta = .11$, $SE = .13$, $p = .42$). Our findings show that debtors who anticipate stigmatization try to reduce debt on their own rather than seeking help, a tactic that allows them to keep their debt hidden. Although help avoidance and secrecy may mitigate potential stigmatization, concealment can have negative long-term effects on debt and well-being because individuals do not access critical resources such as education and social support. Recognizing these issues, we test an intervention in Study 6.

Study 6

In previous sections, we tested our theory (Figure 1) and demonstrated how the cycle of debt, anticipated stigmatization, and concealment behaviors influence well-being and contribute to further debt accumulation. However, the overarching goal of theorizing about this debt cycle is, ultimately, to help individuals who anticipate stigmatization reduce their debt and improve their well-being. With a field experiment in Study 6, we tested an intervention designed to help.

We looked to what has worked for other concealable stigmas to help us design an intervention. Community-based behavior change programs (e.g., Alcoholics Anonymous) attempt to help individuals through a combination of education and social connection. Expressing one's emotions among others experiencing similar circumstances can be cathartic, especially for those who feel the need to conceal (Moisio and Beruchashvili 2010). Indeed, stigma disclosure and the resultant support from peers is critical for improving well-being (Beals, Peplau, and Gable 2009; Chaudoir and Fisher 2010). We expected that behavior change communities may also improve financial outcomes by encouraging responsible debt reduction behaviors. Unfortunately, rigorous experimental evidence linking community programs to actual behavior change in other stigma contexts, such as weight loss or alcohol consumption, is limited, probably because programs have operationalized success in terms of emotional outcomes and examined communities where behavior change is not necessarily the focus or is difficult to measure (e.g., Brooks et al. 2017; Gesell et al. 2016; Litt et al. 2016; Wang and Willis 2016).

In Study 6, we collaborated with a company experienced in providing financial education to indebted individuals. Given evidence of the important link between anticipated stigmatization and debt concealment in Studies 1–5, we tested whether well-being and financial outcomes are better in a community-based (peers present) or a private (peers absent) behavior change course. We expected those who anticipated greater stigmatization would benefit more from the opportunity to develop new, supportive social connections than those who received the education program with only private instruction. The concealment tactics identified in our previous studies (secrecy, help avoidance) isolate consumers from social connections, whereas a community-based course may offer a reprieve from isolation or strained relationships. Further, the community aspect may encourage cathartic debt disclosure because participants are in a safe, supportive environment with others who disclose the same stigma, reducing stigmatization risk. We used this field experiment to test whether social connection with others who share the same debt stigma would improve well-being, financially responsible behaviors, and debt repayment.

Method

Course and participant details. The 210 participants in this field experiment (138 women, 71 men, 1 nonbinary; $M_{age} = 39.9$ years) had a median debt load of $36,288, not including mortgages, and were randomly assigned to complete a five-month debt reduction course in a classroom with other participants (community-based condition) or online (private condition). Participants who enrolled in the course with a partner were randomly assigned as a couple to one of the treatment conditions. To collaborate with the education company, we had to agree that couples could remain together, which impacts the number of participants per condition.

Classes occurred once a month for three hours, and participants in both treatment conditions received the same workbook with financial education activities to be completed during and outside of class. These workbooks, provided by the company, ensured that content (e.g., zero-based budgeting, saving strategies) was covered at the same time and depth in both conditions. To assess whether our treatment conditions would result in emotional and financial outcomes that would surpass doing nothing, we also had a control condition.

Private condition. Participants took the class, at the same time, once a month online synchronously via Zoom. Two instructors delivered the course content as a webinar, so participants could see and message with the instructors but could not see or hear other participants or their messages. Thus, although participants were aware that other clients were participating in the course, they were not able to interact and receive social support. Participant questions were shared with the class but reframed as part of the education delivery. For example, a participant might message the instructor with the question "How do I budget on an irregular income?" Other participants would not see the message, but the instructor would communicate the question to everyone by saying, "You might be wondering, 'What if I have irregular income?' How do I budget for that?"

Community condition. Participants received the same course content from the same instructors as in the private condition, but they were physically in the same classroom with other participants. Participants also had access to a Facebook group monitored by the instructors. Information made available to participants via Facebook or email in the community condition (e.g., as a result of questions) was also communicated to participants in the private condition using the reframing technique discussed.

Control condition. Participants who completed our survey in Study 5 were enrolled in the control condition for this study. These participants did not receive education during the study period but were offered the opportunity to take the course when the study period ended, an approach used in Anderson, Chandy, and Zia (2018) to incentivize survey completion.

Measures. Participants in the treatment conditions completed an online survey one week prior to the first class (first survey) and within one week after the last class (second survey). The same instruments were administered to control participants with a similar amount of time between the first and second surveys as in the treatment conditions. The company we collaborated

Table 3. Means, Standard Deviations, and Tests of Significance for Study 6.

	Full Sample N = 210	Private (A) N = 58	Community (B) N = 78	Control (C) N = 74	*p*-Value A = B	*p*-Value A = C	*p*-Value B = C
Age in years	39.90 (7.14)	38.47 (7.20)	41.27 (6.59)	39.58 (7.49)	.02*	.37	.14
Gender (0 = male, 1 = female)	.67 (.50)	.76 (.54)	.63 (.49)	.65 (.48)	.13	.21	.80
Children	2.78 (1.78)	3.10 (1.98)	2.79 (1.86)	2.50 (1.48)	.36	.06	.29
Relationship	.80 (.40)	.74 (.44)	.82 (.39)	.82 (.38)	.26	.24	.95
Highest education	4.96 (1.39)	4.90 (1.23)	4.90 (1.51)	5.07 (1.37)	.99	.49	.45
Anticipated stigmatization in Month 1	3.13 (1.38)	3.20 (1.43)	3.20 (1.45)	2.99 (1.27)	.99	.39	.36
Well-being in Month 1	5.22 (1.04)	5.25 (.98)	5.11 (1.09)	5.33 (1.05)	.44	.67	.70
Debt in Month 1 (thousand $)	36.29 (32.89)	36.95 (27.93)	40.72 (37.56)	31.10 (30.80)	.51	.32	.08
Household income (thousand $)	86.00 (28.92)	79.52 (28.23)	92.54 (27.44)	84.19 (29.92)	.01*	.35	.08

*$p < .05$.

with collected other measures in the surveys. We focus our methodological description and analyses on the measures pertinent to our theory. Anticipated stigmatization ($\alpha = .85$) and financial stress ($\alpha = .80$) were measured in the first survey, before education began.

Three mediators were measured in the second survey. The first mediator, social connection, has been explored in prior research as a potential benefit of behavior change communities (e.g., Gesell et al. 2016; Wang and Willis 2016). Further, social connection is captured implicitly in our conceptual model because social connection is, roughly speaking, the opposite of avoiding help and social support. A willingness to connect with others in a behavior change course implies that you are willing to open yourself up to others to receive help (rather than continuing to avoid help). To measure social connection, we used a four-item scale: "I developed relationships with people in this course," "I shared a bond with other members of this course," "I felt an emotional connection with other members in this course," and "I had a lot in common with members in this course" (1 = "strongly disagree," and 7 = "strongly agree"; $\alpha = .88$). The second mediator, debt disclosure, is the opposite of debt secrecy, and thus again is implicitly captured in our model. Establishing social connections with others suggests that you may be open to help, but disclosing your debt is required before such help can be received. Thus, we examine debt disclosure as an outcome of social connection and measured it with two items: "I had the opportunity to share my story or experience with debt" and "I was able to share the emotional experience of consumer debt while taking this course" (1 = "strongly disagree," and 7 = "strongly agree"; $r = .87$).

Finally, in terms of debt reduction, extant research has demonstrated that successful behavior change requires motivation (Ryan et al. 2011; Ryan and Deci 2008). Social connection fosters shared motivation toward performance goals (Walton et al. 2012) and may be especially powerful for stigmatized groups (Walton and Cohen 2007). Thus, we tested how the community condition and resultant social connection affects individuals' motivation in the debt course. This was a three-item measure: "I felt motivated during the course," "I felt engaged during the course," and "I felt myself gaining momentum as the course progressed" (1 = "strongly disagree," and 7 = "strongly agree"; $\alpha = .94$). Social connection, debt disclosure, and motivation were not measured in the control condition because participants in the control condition did not participate in the course.

Three outcome measures were pertinent in this study: well-being, debt reduction behaviors, and percentage of actual debt repaid. The well-being measure, which included the same four items as in our previous studies, was converted into a change variable by subtracting scores in the first survey (Month 1) from scores in the second survey (Month 5). Debt reduction behaviors were measured with a monthly form that tracked whether participants established a $1,000 emergency fund, created a cash-based budget, successfully stuck with their budget at two separate points in the course, and created a net worth statement. These behaviors were coded as 0 (not achieved) and 1 (achieved) and summed to create a composite index. Consumer debt was measured monthly and was itemized (e.g., $25,349 car loan, $1,368 unpaid credit card). We created a percent debt repaid variable for each consumer by subtracting the reported nonmortgage debt at Month 5 from the debt at Month 1 and dividing the remainder by the debt at Month 1. For couples who did not report individual debts, we divided the debts in half before computing this measure. Summary statistics are in Table 3. Random assignment was generally successful. The only significant differences between conditions are that participants in the community-based condition are approximately three years older and have a slightly higher average income than in the private condition. All other demographic characteristics and the initial debt level are the same for the community, private, and control conditions.

Results

We tested the efficacy of the debt education course by measuring the impact of private and community-based education on debt reduction (compared with control), using OLS regression:

$$\Upsilon_i = \alpha + \beta_1 \text{Private}_i + \beta_2 \text{Community}_i + \sum \gamma_s d_{i \times s} + \varepsilon_i,$$

where Y_i is the total consumer debt repaid by each participant i by the end of the five-month study period. This variable was calculated by subtracting the participant's debt at the end of the study period from their debt at the beginning of the study. The variable Private_i is a dummy variable that indicates if the participant was assigned to the private treatment condition, while Community_i is a dummy that indicates if the participant was assigned to the community-based condition. The variable $d_{i \times s}$ comprises a set of baseline controls for age, gender, number of children, relationship status, education, employment status, estimated household income, and debt held by each participant at the beginning of the study. These controls were included to improve precision of estimates. Participants in the private condition paid off $3,531 more of their debt than those in the control condition ($p = .008$). Participants in the community condition paid off $4,370 more than control ($p < .001$). When we combine the two treatment conditions (i.e., community and private), we find that debt education results in paying off $4,014 more than control ($p < .001$). These results suggest that, on average, the course was effective in reducing debt. We next directly compared the two treatment conditions. There was no significant difference in the total debt paid by participants in the community course versus the private course ($\beta =$ 935.68, SE = 776.15, $p = .23$). However, we next test whether individuals who anticipate high levels of stigmatization perform better in the community environment.

Before we tested the effectiveness of the community-based intervention, we first tested the main hypotheses from our conceptual model. Estimated household debt was not significantly related to anticipated stigmatization ($\beta = .004$, SE = .002, $p =$ .12). A measure of subjective debt was not collected in this study, so H_1 was not supported. Next, we tested the mediating relationship between anticipated stigmatization, concealment through debt secrecy, and well-being (PROCESS Model 4). Financial stress, age, gender, education, and income were included as covariates because they are theoretically related to well-being. Supporting H_{2a}, anticipated stigmatization (measured in Month 1) was positively related to debt secrecy ($\beta =$ .41, SE = .08, $p < .001$). In support of H_3, debt secrecy was negatively related to well-being in Month 1 ($\beta = -.11$, SE = .05, p = .040). Finally, supporting the results from Study 1, there was no direct relationship between anticipated stigmatization and well-being ($\beta_{\text{direct}} = -.09$, 95% CI: [−.22, −.03]), but there was a significant indirect effect of anticipated stigmatization on well-being through debt secrecy ($\beta_{\text{indirect}} = -.05$, 95% CI: [−.10, −.005]). Next, we explore whether the community-based version of the course helps individuals break the cycle of debt and reduced well-being.

Effect of community versus private condition on well-being. We evaluated the change in well-being from Month 1 to Month 5 with a moderation analysis (PROCESS Model 1): anticipated stigmatization was the predictor, the community versus private condition was a dichotomous moderator, change in well-being was the dependent variable, and financial stress, age, gender, education, and income were covariates. Financial stress was positively related to change in well-being ($\beta = .21$, SE = .09, $p = .023$). This is intuitive because individuals feeling stress are likely to have lower well-being at the start of the course, and their stress leads them to want to seek help for debt, as we saw in Studies 3 and 4. Further, there was a significant interaction ($\beta = .43$, SE = .17, $p = .011$), such that anticipated stigmatization was negatively associated with change in well-being in the private condition ($\beta = -.37$, 95% CI: [−.65, −.10]) but not in the community condition ($\beta = .06$, 95% CI: [−.14, .26]). That is, in the private condition, individuals who experience high levels of anticipated stigmatization do not see the same positive changes in well-being as those who do not anticipate stigmatization, but in the community condition they experience the same positive effects as their peers. A floodlight analysis indicated a Johnson–Neyman point of 3.9; that is, participants who anticipate stigmatization to a greater extent (at a value of 3.9 or higher on the seven-point scale) experience significantly more positive changes in well-being in the community condition compared with the private condition.

To probe this result, we performed a moderated mediation (PROCESS Model 7) with debt disclosure as the mediator. From Study 1, we found that debt secrecy leads to reduced well-being; therefore, we expected that disclosing debt (i.e., the opposite of concealment through secrecy) would increase well-being by providing a cathartic relief for individuals who experience high levels of anticipated stigmatization. As expected, the index of moderated mediation excluded zero ($\beta = .10$, 95% CI: [.01, .25]). The community versus private condition moderates the relationship between anticipated stigmatization and debt disclosure ($\beta = .46$, SE = .23, $p = .047$), such that anticipated stigmatization leads to more debt disclosure in the community condition, which leads to more positive changes in well-being ($\beta_{\text{indirect}} = .06$, 95% CI: [.001, .15]). That is, individuals who experience high levels of anticipated stigmatization are more likely to disclose their debt in the community condition, which positively impacts well-being.

We expect that this result occurs because individuals are more comfortable disclosing their debt and seeking help in the community condition, where they have had the opportunity to establish social connections with a group of supportive peers who share similar debt experiences. In short, establishing social connections begets debt disclosure in the community condition. Based on this logic, we performed a moderated serial mediation (PROCESS Model 83) with social connection as the first mediator and debt disclosure as the second mediator (i.e., anticipated stigmatization → social connection → debt disclosure → well-being). As expected, the index of moderated mediation excluded zero ($\beta = .06$, 95% CI: [.01, .14]). Anticipated stigmatization leads to less social connection in the private condition compared with the community condition. The lack of social connection in the private condition leads to less debt disclosure (i.e., more concealment), which leads to less positive changes in well-being ($\beta_{indirect} = -.04$, 95% CI: [−.10, −.002]). That is, individuals who experience high levels of anticipated stigmatization are unable to connect with peers in the private condition, experience less social connection, and do not feel comfortable disclosing debt. Instead, they continue to conceal debt, even though they have opportunities to share with the instructor, and, consequently, do not experience the same positive changes in well-being. However, in the community condition, they break the destructive cycle by connecting with others in a similar financial situation and disclosing their debt experience, which provides relief and social support.

Effect of community versus private condition on behavior change. We tested the effect of community education on debt reduction behaviors (i.e., budgeting- and savings-related behaviors). We first conducted a moderation analysis (PROCESS Model 1): anticipated stigmatization was the predictor, the community versus private condition was a dichotomous moderator, and debt reduction behavior was the dependent variable. Financial stress, age, gender, education, and income were covariates. As expected, the interaction was not significant ($\beta = -.27$, $SE = .26$, $p = .30$). Instead, drawing on extant research identifying the importance of motivation for behavior change (Ryan and Deci 2008), we ran a moderated mediation (PROCESS Model 7) with motivation as the mediator. As expected, the index of moderated mediation excluded zero ($\beta = .16$, 95% CI: [.01, .39]). The community versus private condition moderates the relationship between anticipated stigmatization and motivation ($\beta = .43$, $SE = .22$, $p = .06$), such that anticipated stigmatization leads to lower motivation in the private condition, which leads to fewer debt reduction behaviors ($\beta_{indirect} = -.10$, 90% CI: [−.22, −.01]; i.e., significant at 90% confidence). Next, recognizing the importance of social connection, we conducted a moderated serial mediation (PROCESS Model 83): social connection and motivation were the first and second mediators, and the community versus private condition was the moderator. The index of moderated mediation excluded zero ($\beta = .11$, 95% CI: [.01, .27]). In the private condition, anticipated stigmatization leads to less social connection, which leads to less motivation in the course and results in performing fewer debt reduction behaviors ($\beta_{indirect} = -.08$, 95% CI: [−.19, −.001]).

Next, we conducted a moderation analysis (PROCESS Model 1) with percent debt repaid as our dependent measure. We included individual debt in Month 1 as a covariate because it is related to the dependent measure. As expected, debt in Month 1 (in thousand dollars) was negatively related to percent debt repaid ($\beta = -.11$, $SE = .04$, $p = .003$); a higher amount of starting debt is associated with a lower percentage of that debt repaid. Similar to our analysis for debt reduction behaviors, the interaction between anticipated stigmatization and the education condition was not significant ($\beta = -.83$, $SE = 2.10$, $p = .69$), but we probed the result with a moderated mediation (PROCESS Model 7) to determine the effects of motivation. As expected, the index of moderated mediation excluded zero ($\beta = .90$, 95% CI: [.05, 1.95]), indicating that the effect of anticipated stigmatization on the debt repaid, through motivation, was significantly more positive in the community condition compared with the private condition. Finally, we conducted a moderated serial mediation (PROCESS Model 83) with social connection and motivation as the first and second mediators. As expected, the index of moderated mediation excluded zero ($\beta = .79$, 95% CI: [.09, 1.84]). In the private condition, anticipated stigmatization leads to less social connection, then less motivation, and results in participants paying off a lower percentage of their debt ($\beta_{indirect} = -.55$, 95% CI: [−1.38, −.03]). Each additional point on the seven-point anticipated stigmatization scale is associated with $200 less debt repaid in the private condition (using the average participant debt level) through this process of social connection and motivation. In summary, although the community condition did not improve debt reduction for all individuals who anticipate stigmatization, it offered individuals the opportunity to establish social connections, which are critical to enhancing motivation and behaviors that support debt reduction.

Discussion

In Studies 1 through 5, we found evidence that debtors anticipate stigmatization and actively conceal debt from others to avoid potential judgment and discrimination. However, anticipated stigmatization has deleterious effects on well-being and may contribute to further debt accumulation. Qualitative research of other stigmatized behaviors, such as alcohol consumption and overeating, has shown that community-oriented behavior change programs can increase positive emotions and well-being through the development of supportive relationships (e.g., Brooks et al. 2017; Moisio and Beruchashvili 2010; Wang and Willis 2016). Our field results in Study 6 experimentally support and extend this research by providing evidence of actual behavioral change in terms of debt reduction behaviors and percent debt repaid. Further, by accounting for the role of anticipated stigmatization, which is unique to our research, we demonstrate who may benefit the most emotionally and behaviorally in a community setting. The results of the study provide evidence that for debtors who anticipate stigmatization, increasing social connection by developing supportive relationships is crucial to increasing motivation and commitment to behavior change resulting in actual debt repayment.

General Discussion

Theoretical Implications

Consumer debt is relevant for most North American families, and rising debt is a critical issue for governments and other stakeholders. Extant research has studied stigma related to bankruptcy and mortgage strain, but consumer debt is more pervasive. We offer a novel perspective of indebtedness with implications for helping consumers reduce their consumer debt.

We define anticipated stigmatization of debt as the negative judgment and discrimination an individual expects to experience because of their indebtedness. In other contexts, anticipated stigmatization has (1) been measured broadly with one or two items, (2) used subjective perceptions of experienced stigmatization as a proxy measure, or (3) involved participants thinking about how other people might be stigmatized (Angermeyer et al. 2004; Hing and Russell 2017; Major et al. 2014; Markowitz 1998), which may not reflect individuals' beliefs about whether they would be personally stigmatized. In contrast, our measure is self-focused and specific to indebtedness, which is important in understanding how anticipated stigmatization is related to debt concealment, accumulation, and reduction.

Through six studies, we demonstrate that anticipated stigmatization is related to consumer debt, reduced well-being, and debt concealment through secrecy (Studies 1 and 6), increased social spending (Study 2), and help avoidance (Studies 3, 4, and 5).[6] Unique to the debt context, we demonstrate that anticipated stigmatization leads to a recursive cycle that can hinder debt reduction. We identify an important factor, financial stress, that prompts debtors to reduce their spending and to seek help. However, anticipated stigmatization counteracts these effects; individuals conceal debt by avoiding help and by spending more in social situations. Spending more is unique here, because in other stigma domains (e.g., gambling, smoking) anticipated stigmatization and the desire for concealment does not lead to more of the stigma-related behaviors. Further, although help avoidance has been demonstrated in other contexts (e.g., Clement et al. 2015), we show how the competing effects of anticipated stigmatization (concealing debt) and financial stress (reducing debt) affect how individuals attempt to manage their debt issues on their own or with help from peers and debt professionals. Avoiding help and support further hinders debt reduction and contributes to the overall feelings of social isolation, loneliness, and reduced well-being experienced by debtors who anticipate stigmatization.

We identify how to help indebted individuals who anticipate stigmatization break the stigma cycle and repay their debt (Study 6). Although the benefits of community-based participation on emotional and social outcomes have been examined in other contexts, our investigation is the first to examine the effect on well-being in a consumer debt context and measure actual behavior change (debt reduction). Research in other stigma contexts has examined correlations between self-report measures of emotion and perceptions of social relationships and experimentally manipulated the presence or strength of community. However, researchers have not explicitly measured behavior change, or they have relied solely on qualitative interviews to identify the benefits of support communities (Brooks et al. 2017; Gesell et al. 2016; Litt et al. 2016). In contrast, we quantitatively measure behavior change in two ways: by tracking specific behaviors that encourage responsible spending and saving and by monthly itemized tracking of actual individual consumer debt over a five-month period.

In contrast to stigma research, financial education research has concentrated on behavior change (e.g., Carpena et al. 2019; Mandell and Klein 2009). Researchers have found an inconsistent link between financial education and behavior (Fernandes, Lynch, and Netemeyer 2014), perhaps because programs have focused on improving financial literacy in general and personal traits might affect an individual's success. Our research identifies a new relatively stable, individual-level factor (anticipated stigmatization) that impacts the effect of financial education on behavior. We show how community-based and private education differentially contribute to debt reduction behavior for individuals who anticipate stigmatization.

Substantive Implications and Future Directions

Results from our field experiment (Study 6) suggest there are significant benefits to participating in a debt-related behavior change community. First, consumers who anticipate stigmatization will improve well-being by participating. The behavior change community offers an opportunity for social connection and support and the freedom to disclose debt in a judgment-free environment. Second, people will pay down debt. However, the adoption of financially responsible behaviors and debt repayment was not uniform for individuals who anticipated greater stigmatization. The benefits of community-based education were experienced if individuals who anticipated greater stigmatization formed new social connections within the course (and not everyone did to the same extent). This result is consistent with research demonstrating that stigma-related emotions contribute to social withdrawal (Gladstone et al. 2021). In our context, individuals who anticipate greater stigmatization may withdraw from social situations to conceal indebtedness and may continue to do so even in a supportive environment. For these individuals, perhaps the length of the course did not allow enough opportunity to connect with others. Regardless, important implications come from this finding. In community-based courses, we suggest that instructors actively connect participants. Instructors may encourage in-class discussion, facilitate small group activities often, and/or assign partnerships to nurture in-class and out-of-class interactions. Giving individuals the opportunity for frequent contact is crucial so that relationships may be initiated and strengthened through formal and informal exchanges.

Our field experiment shows that for some people, behavior change can reduce debt. However, because debtors who anticipate stigmatization may avoid help, many of them are not able to experience these benefits. To determine what motivates individuals to register for a debt reduction course, we conducted a follow-up survey with Study 6 participants (30 responses). We asked participants to identify what motivated them to ultimately sign up for the debt education class. We coded responses into categories and created a dummy variable for each category. From a regression analysis, we found that individuals who anticipate lower stigmatization were more likely to join the course because they were thinking about long-term planning for retirement and children ($\beta = -.08$, $SE = -.03$, $p = .030$). This trigger is about functional rather than emotional and social needs. In contrast, individuals who anticipate greater stigmatization were more likely to join the course after a

[6] There are additional supportive studies in the Web Appendix.

recommendation from a trusted source (β = .12, SE = .05, p = .025). Because they worry about stigmatization, a recommendation helps them feel comfortable to be honest about their debt without fear of judgment. Future research should continue to explore how to motivate individuals who anticipate stigmatization to stop hiding and seek help.

Our field experiment focused on the benefits of social connection in the community condition, but it is possible that a small amount of social support is gained by interacting with the instructor in the private condition. Future research should explore how instructors can increase social support for individuals who anticipate stigmatization. Further, it is possible that couples and singles may differentially experience the effects of social connection. The participants in our field experiment included couples and singles; however, our study was not designed to isolate these groups, and we did not find significant differences between groups. Future research should isolate the effects of relationship status and partner participation in community-based courses. We also believe that anticipated stigmatization is an important factor to investigate in how couples manage debt. Future research focusing on how couples manage and communicate about finances—including pooled accounts, division of financial responsibilities, and financial infidelity (e.g., Garbinsky et al. 2020; Ward and Lynch 2019)—should explore anticipated stigmatization.

We were generally unsuccessful using situational cues in our studies to increase concealment, which creates future research opportunities. However, this further demonstrates that anticipated stigmatization is a robust construct that is relatively insensitive to situational variance in debt disclosure risk. That is, an individual anticipating a high level of stigmatization may navigate all social situations with caution, regardless of risk and whether concealment is warranted by the situation. Future researchers could explore ways to understand and proactively interrupt this process to break through and help debtors reduce concealment and seek help.

Acknowledgments

The authors are grateful to Dr. Karen Hussey, Research Officer, for her assistance with data collection.

Associate Editor

Mary Francis Luce

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This research was supported by funding from the Social Sciences and Humanities Research Council.

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