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Demographics in Sales Promotion Proneness: A Socio-Cultural Approach
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ABSTRACT
We investigate the impact of demographics (i.e., income, education, and gender) on promotion proneness and provide socio-cultural explanations why certain demographic groups are more promotion prone. Shopping is a domain where consumers accumulate their expertise and skills. To be deal prone requires not only the motivation for monetary savings but also the legitimate possession of human capital in shopping including cognitive abilities, information, and shopping experience and skills. The positive effects of education and income on the use of coupons and rebates are discussed along with the influence of gender and psychographics such as shopping enjoyment and psychological gender congruency.

INTRODUCTION
Modern America has been characterized as a consumption-oriented culture. As consumption became a focal point of American life, retailing became a critical part of the culture as well as the economy. One distinctive characteristics of the U.S. retail market is that it is extremely price promotion driven. NCH Marketing reported that in 2002, approximately 248 billion coupons were distributed and consumers redeemed 3.8 billion of these, saving more than $3 billion (as cited in Park and Gómez 2004). Electronic methods have become popular, and channels of distribution have been diversified to include magazines, direct mails, targeted frequent shopper mails, frequent shopper cards, and online coupons as well as traditional free-standing distribution and newspaper inserts. Rebates are becoming popular among manufacturers because of the low redemption rate—only 5–10 percent—and the direct contact with consumers (“Coupons and Rebates” n.d.). On the consumers’ side, the current retail environment requires strategic decisions to maximize savings out of an attractive range of diverse sales promotions.

In response to this kind of retail market, there has been a tremendous amount of research on price promotions. Consumer behavior towards promotional deals is explained in terms of cost and benefit (Henderson 1994). Economics-based research has dealt with such benefits as monetary savings, increased quality, and the convenience of reduced search costs and factors related to the opportunity cost of time (e.g., Blattberg et al. 1978; Narasimhan 1984; Urbany et al. 1996). Psychological approaches have covered emotional incentives such as self-expression as a smart shopper, stimulation, entertainment, and social disincentives (Ashworth, Darke, and Schaller 2005; also see Chandon, Wansink, and Laurent 2000).

While economic approaches and psychological constructs are typically studied topics, socio-cultural approaches have been lacking in promotion research. Demographic characteristics including income, education, family status, gender have been researched mainly for profiling purposes. The underlying reason that a certain group of people are more promotion prone than others has not been studied. Furthermore, some general assumptions—“females are more promotion prone” or “low-income families use coupons more”—have never been empirically, consistently supported (inconsistent empirical findings are discussed in the next section.)

The purpose of this study is twofold: (1) to empirically test the impact of demographics (i.e., income, education, and gender) on promotion proneness (i.e., coupons and rebates) and (2) to provide socio-cultural explanations why certain demographic groups are more promotion prone. The concepts of human capital and gender differences are employed to provide socio-cultural accounts of the general promotion prone behavior of American people, as part of their consumption activities, not specifically for particular product lines or categories.

We used large-scale consumer survey data from the 2003 DDB Lifestyle Survey to test the influence of demographics, which, we believe, increases the generalizability of our findings, compared to the studies using small scale consumer panel or survey data and modeling research to estimate promotion responsiveness for specific product categories.

HOMO ECONOMICUS OR THE CONSUMPTION CULTURE ELITE?
Findings in the literature have been inconsistent regarding who is more promotion prone: homo economicus or the consumption culture elite. Some researchers have reported that lower income/education families are more promotion prone, while some have argued that promotion prone consumers exist evenly in all income groups (Blattberg and Neslin 1990 for review; Montaldo 2006). According to the tradition of neo-classical economics, human beings behave to maximize their utilities. Economic man decides whether or not he uses a coupon and a rebate based on the monetary saving expected and the redemption costs (i.e., time and effort). Economic man will use the coupon or rebate only when the financial incentive of doing so exceeds the opportunity cost of its redemption. Redeeming coupons and rebates requires time and effort browsing newspapers and advertisements, clipping coupons, locating the particular brands promoted, and mailing proof of purchase for rebates. As the opportunity cost of coupon or rebate redemption is likely to be lower for lower income/education people, they are thought to be more prone to use coupons and rebates than those with higher income/education. The concept of opportunity cost provides a reasonable account for the higher coupon and rebate redemption behavior of low income/education consumers. In fact, a number of studies have reported a negative relationship between coupon and rebate redemption and income and education (e.g., Jolson, 1987; Moody 1987 cited in Blattberg and Neslin 1990). The familiarity of retail stores, wages per hour, free time, and the ability to organize time were also studied as surrogates for opportunity costs of coupon redemption. (Blattberg et al. 1978; Mazumdar and Papatla 1995; Narasimhan 1984 cited in Blattberg and Neslin 1990).

Empirical findings also contradict the opportunity cost-based explanation of coupon redemption behaviors. Teel et al. (1980), Blattberg et al. (1978), and Bawa and Shoemaker (1987) reported higher deal proneness by higher-income consumers. A few studies argued for an inverted U-shape effect, suggesting coupon proneness peaks at middle income (Nielsen 1985 and Narasimhan 1984 cited in Blattberg and Neslin 1990). Some studies even suggested that psychographics are much better discriminators than demographics (Rosen 1985 cited in Blattberg and Neslin 1990; Park and Gómez 2004).

In spite of a tremendous amount research done in the area of demographics and promotion proneness in past decades, there has been little effort to address these contradictory findings. Further, there have recently been dramatic changes in the retail industry, including more diverse retail channels (i.e., the Internet and cata-
logues) and a variety of deal formats and delivery methods (e.g.,
paper coupons, email coupons, online coupons, in-store coupons,
and rebates). We propose in this study that the theory of human
capital would provide possible explanations for the relationship
between demographics and the use of coupons and rebates.

Gary Becker’s theory of human capital allows for
capital refer to people’s knowledge, skills,
health, or values that could yield useful outputs like any other
financial or physical asset (Becker, 2002). Becker (2002) views
education and job training as investments in human capital.
Bourdieu’s (1984) cultural capital is a similar concept to Becker’s,
emphasizing human competence and the effect of competence on
consumption. Bourdieu (1984) maintained that the social origin
that affects early socialization, formal education, and adult
capital and motivation in human resource management (Boudreau
and Ramstad 2005; Marrewijk and Timmers 2003) and as the owner’s
education, previous business experience, and technical skills for
successful entrepreneurial ventures (Madsen, Neergaard, and Ulhøi
2003). With regard to consumption, human capital refers to consumer
knowledge (Ratchford, 2001). Ratchford (2001) argued that consumer choice of product, brand, or lifestyle is the most efficient
one based on holdings of human capital formed by education,
informal education, and consumption experiences associated with
learning by doing. Studies on price search measured human capital
by market knowledge, investment search, and perceived time
management skills (Putrevu 1997; Urbany et al. 1996).

Efficient shopping requires human capital, including
knowledge and the individual’s ability to collect, process, and
organize various information available in the market. In the heavily
promotional retail environment, the goal of shopping is not only to
acquire the right products. Consumers are driven to find the right
products at “better” or “best” prices. To achieve shopping efficiency
by paying lower prices requires the use of one’s assets relevant to
this consumption behavior. To be deal prone requires not only the
motivation to save money but also consumption/shopping experiences and cognitive abilities. Price researchers have explored
various research topics (e.g., remembering price, price expectation,
forecast for future prices) assuming serious cognitive effort to
collect and process price information. If using deals and discounts
is a serious cognitive activity, then it is plausible to propose that
one’s level of human capital will influence promotion response behaviors. If one has a high level of human capital accumulated in
his/her consumption, he or she may show greater use of sales
promotions.

We propose that shopping is a domain where consumers accumulate their expertise and skills, and that deal proneness requires the legitimate possession of human capital in consumption.
We measure human capital in consumption behaviors by consum-
ers’ education and price/promotion knowledge. Formal education
is generally believed to improve one’s cognitive capacity to seek
out deals (e.g., coupons and rebates), the ability to organize, locate,
and use them, and the ability to manage time, which consequently
reduces the opportunity cost of promotion redemption. We believe
that market knowledge, including price knowledge and exposure to
sales promotion information, forms human capital that enhances
consumption skills and practices. Market knowledge contributes to
reducing decision costs when shopping or deciding whether or not
to participate in a sales promotion.

H1: Promotion proneness will be greater when the level of
human capital is higher.
H1(a): Those with a higher level of education use coupons and
rebates more.
H1(b): Those with more price/promotion knowledge use
coupons and rebates more.

Literature discusses the effect of income on deal proneness
along the same line as the education effect. The underlying
assumption is that income and education define one’s social standing.
Income as an index of class reflects a traditional Marxist notion.
Other sociologists including Weber and Warner make social
stratification multi-factored, including social honor or network
(Coleman 1983; Giddens 1989). Identification of social status is
now believed to be influenced by educational credentials, occupation,
family history, social skills, status aspirations, cultural level,
community participation, and more (Coleman 1983), because all of
these factors have effects on social life. In this study, we propose an
opposite direction for the effect of income from that of education
(H1). We suggest that high education represents a cognitive resource
to store knowledge as human capital, while high income reflects the
high opportunity cost of the use of sales promotions. As reviewed
earlier, a number of past researchers have argued for a negative
effect of income on deal proneness from the perspective of the
opportunity cost of time. We hypothesize that those with a higher
income are less prone to seek out sales promotions, as the opportunity
cost of time spent to respond to or redeem promotions increases
when income rises. Moreover, upper-class people are generally
known to value quality merchandise over low price (Coleman
1983), so consumers with a high income, those who have fewer
economic constraints, will not be drawn to the sales promotion that
has the financial or emotional appeal of “paying less.”

H2: Those with higher income use coupons and rebates
less.

DO WOMEN LOVE PROMOTIONS?
Numerous studies have suggested that women are more pro-
motion prone (e.g., Harmon and Hill 2003; Mazumdar and Papatla
1995). However, little research has provided explanations for this
behavior. Historically, the separation of consumption from produc-
tion is rooted in the Cartesian dichotomy distinguishing play from
work and the private from the public in Western tradition (Firat and
Dholakia 1998). Similarly, gender as a socially and symbolically
constructed identity was constructed based on the meanings that
were generated from the roles attributed to public and private
domains, assigning female to the consumer role and male to that of
the producer (Firat and Dholakia 1998). Although the roles of men
and women have changed and gender coding is now less clear, the
gender ideology associating the attributes of the ideal consumer
with feminine traits underlies society and literature. Since Veblen
(1899) accounted for the role of women in conspicuous consump-
tion, women have been still prominent in the area of everyday
consumption such as clothing and furnishing (Collins 1992).

Studies have shown that women overall use coupons more
than men (Harman and Hill 2003; Mazumdar and Papatla 1995).
This is partly because household purchases have traditionally been
the role of women, but we argue that it is also because women are
more socialized to shop and accordingly develop more experience
and thus more human capital in consumption. Regardless of their
personal interests or abilities, women tend to develop expertise as
good shoppers compared to their male counterparts. The difference in consumption between genders is also affected by the identity of gender with product use, for example associating attendance in performing arts events with female identity (Caldwell and Woodside 2003; Gainer 1993). We propose that different forms of consumer-oriented sales promotions are associated with different gender identities, which lead to differences in participation: price-off coupons would be identified as more female than male, because coupons have been used to promote products with female associations such as groceries. We hypothesize that manufacturer’s rebates would be more gender neutral. Rebates do not appear to take on any gender identity because they are often used for sales promotion of non-grocery products. (Harman and Hill 2003).

H3(a): Women use coupons more than men.
H3(b): There is no difference in the use of rebates between women and men.

We propose that the gender effect on deal proneness could be moderated by psychological gender identity. Women who have more congruency to their gender (i.e., women who like to be perceived as feminine) might be more prone to promotions with female identity such as coupons. On the other hand, for men, those with more congruency (i.e., men who like to be perceived as masculine) would be less prone to promotions with female identity (e.g., coupons). However, we do not expect gender congruency to affect the use of rebates, since rebates may be considered gender-neutral, as hypothesized in H3(b).

H4(a): Gender congruency will moderate the relationship between gender and coupon use: congruency in women is positively related to coupon use, while congruency in men is negatively related.
H4(b): Gender congruency will not influence the use of rebates for either men or women.

We propose that the effect of human capital would be less manifest in men than in women. For men, the effect of human capital will decrease for a type of promotion that suggests a female identity. The association between coupons and female identity is likely to inhibit men from developing their expertise in the consumption using coupons. However, we do not expect such an interaction effect for rebates, which are perceived to have a gender-neutral identity.

H5(a): The effect of human capital (education and price/promotion knowledge) on coupon use will be less for men than for women.
H5(b): The effect of human capital (education and price/promotion knowledge) on rebate use will not be different between men and women.

We also propose a moderating effect of shopping enjoyment on the gender–coupon use relation. Optimizing the use of personal resources, human beings are selective in developing their expertise. Those who enjoy shopping would locate their cognitive resources as well as other resources such as time in that domain. A significant number of studies support the role of shopping enjoyment as a predictor of shopping behavior such as price search (Putrevu and Rachford 1997; Urban et al. 1996). These days, shopping is not a domain exclusive to women any more. We argue that shopping enjoyment could be a way to lower the socio-psychological guard that has kept men from being responsive to coupon promotions due to the female gender identity association. However, we do not expect such a moderating effect for rebates due to the gender-neutral identity associated. Therefore, we hypothesize

H6(a): The positive effect of shopping enjoyment on coupon use will be manifest for men compared to women.
H6(b): The effect of shopping enjoyment on rebate use will not be different between men and women.

METHOD

Data
To test the hypotheses proposed in this study, the 2003 Lifestyle Survey database conducted by DDB, an international marketing communication firm, was used. The survey was sent to adult male and female members of the Market Facts’ Consumer Mail Panel. The members were chosen using an annualstanding-panel quota sample similar to the U.S. adult population in terms of age, gender, income, geography, and other demographics. Of 5000 questionnaires, usable responses were received from 1440 males (48%) and 1581 females (52%) (response rate of 60.4%). The data set included a wide range of questions encompassing attitudes, interests, opinions, activities, shopping channels, and media use. In the past, numerous researchers in their respective fields of advertising (Shrum, McCarty, and Lowrey 1995), consumer research (Lastovicka et al. 1999), communication (Holbert, Shah, and Kwak 2004), health (Bergman 2003), and psychology (Shah, Friedman, and Kruglanski 2002) have repeatedly used the DDB Lifestyle Survey data.

Measurement

Independent Variables. Dependent variables include the use of coupons and manufacturer’s rebates. Respondents were asked to indicate how often they “used a ‘price-off’ coupon” and “sent in for a manufacturer’s rebate” during the past 12 months. Responses were ranged on a 7-point scale: 1. None in past year; 2. 2–4 times; 3. 5–8 times; 4. 9–11 times; 5. 12–24 times; 6. 25–51 times; 7. 52+ times.

Independent Variables. Independent variables include education, price/promotion knowledge, income, gender, gender congruency, and shopping enjoyment. The data set includes self-reported information on education, income, and gender. Education was classified into two categories: college degree or above versus less than college degree. For income, those who had annual household incomes of less than $40,000 were classified as the low-income group and those with over $40,000 as the high-income group. The U.S. Census reported the median household income in 2003 as $43,318 (U.S. Census 2003).

Price/promotion knowledge was measured by four items. Responses on the following two items, “I always check prices even on small items” and “I shop a lot for specials” were assessed on a six-point scale from “I definitely disagree” to “I definitely agree.” Another two items asking whether they read newspaper Sunday magazines and newspaper retail inserts were used to measure price/promotion knowledge. The global score for price/promotion knowledge was calculated by summing the standardized scores of responses to the four questions, which reflects the amount of price/promotion knowledge obtained from shopping experiences and promotion media.

Respondents were asked to indicate the degree to which the words “masculine” for male respondents and “feminine” for female

1Household income was measured by categories. The 2003 U.S. household median income fell in the range from $40,000 to $49,999.
respondents describe the person they would ideally like to be. Their responses ranged from 1 “Definitely does not describe ideal self” to 6 “Definitely does describe ideal self.” This item measures one’s motivational level to display the traits of biological sex. Respondents were grouped into either a high or low level of gender congruency by mean split.

Two items were summed to measure the consumer’s degree of shopping enjoyment: “I view shopping as a form of entertainment” and “Shopping is no fun anymore.” which were anchored at 6 points from “I definitely disagree” to “I definitely agree.” Responses to the two items were summed. Respondents were grouped into high versus low by a mean score. The correlation of the two items was .303.

RESULTS

A Multivariate Analysis of Variance (MANOVA) was conducted to test the hypotheses proposed. Independent variables and interaction terms tested in the analysis were education, price/promotion knowledge, income, gender, shopping enjoyment, gender x gender congruity, gender x education, gender x price/promotion knowledge, and gender x shopping enjoyment. The effects of these variables were tested on the two dependent variables, the use of coupons and use of rebates.

The analysis reveals significant multivariate effects of education, price/promotion knowledge, income, gender, shopping enjoyment, and gender x shopping enjoyment [F(2, 2373)=7.804, p=.000; F(2, 2373)=85.121, p=.000; F(2, 2373)=38.889, p=.000; F(2, 2373)=34.742; F(2, 2373)=14.966, p=.000; F(2, 2373)=6.029, p=.002, respectively], but no significant effects of gender x gender congruency, gender x education, and gender x price/promotion knowledge. We further examined univariate results for significant effects on each dependent variable, the use of coupons and rebates.

H1(a) and H1(b) are supported, which indicates the positive effect of human capital on promotion proneness. Those with a higher level of education appear to use coupons [F(1, 2374)=5.837, p=.016] and rebates more [F(1, 2374)=13.634, p=.000]. Those who are high on price/promotion knowledge show greater use of coupons and rebates than those who are low on knowledge [F(1, 2374)=146.388, p=.000; F(1, 2374)=66.991, p=.000, respectively].

H2 posits a negative income effect on the use of coupons and rebates, which is not supported. The univariate result rather suggests a positive income effect. Surprisingly, those with higher incomes appear to use coupons and rebates more [F(1, 2374)=28.822, p=.000; F(1, 2431)=68.125, p=.000, respectively].

The gender effect reveals interesting results. Women use coupons more [F(1, 2431)=48.038, p=.000], while men show greater use of rebates [F(1, 2374)=5.900, p=.015]. Thus, only H3(a) is supported.

There is marginal support for H4(a), such that gender congruency is positively related to coupon use for women, while gender congruency is negatively related for men [F(1, 2374)=3.093, p=.079]. The use of coupons appears to increase as psychological female identity increases and male identity decreases. There is supporting evidence for H4(b) such that gender congruency does not appear to influence the use of rebates regardless of gender. There is no significant difference in effects of human capital (i.e., education and price/promotion knowledge) by gender; H5(a) is not supported, and H5(b) is supported.

H6(a) proposing a moderating effect by shopping enjoyment on the gender-coupon use relation is supported. As depicted in Figure 1, higher shopping enjoyment appears to lead to greater coupon use for men [F(1, 2374)=11.566, p=.001]. However, women’s coupon use does not appear to be influenced by their degree of shopping enjoyment. A marginally significant interaction effect by gender on the use of rebates emerged. That is, the positive effect of shopping enjoyment appears to be more manifest for men compared to women (Figure 2) [F(1, 2374)=2.754, p=.097].

DISCUSSION

This study examined the effect of demographics (i.e., education, income, and gender) on promotion proneness. The effects of demographics were further investigated in relation to psychographic traits such as enjoyment of shopping and gender congruency. The effects of demographics were examined in terms of what benefits or costs those represent for shoppers to gain monetary savings from sales promotions. We employed the concept of human capital to explain deal proneness. Ratchford (2001) argued that the model of human capital could provide unique insights into the role of consumer knowledge, skills, and expertise in explaining various consumer behaviors (e.g., brand loyalty and lifestyles). Consumers strategically maximize consumption efficiency using their economic and human capital. Shopping for most household goods and personal goods such as clothing or food is a repetitive task. Increasing human capital is economical, because unlike economic capital, human capital is accumulated, not used up, through purchasing activities. Thus the benefits of sales promotions increase as costs decrease by accumulation of human capital. We consider opportunity cost to be a long-term effect of participation in repetitive shopping tasks.

The human capital of consumption is developed through informal training of consumption skills and updates in market knowledge in addition to investment in formal education. Previous studies of sales promotion simply treated education as the ability to organize time or reported a positive correlation without sufficient explanation (Mazumdar and Papata 1995; Narasimhan 1984). We interpret the observed influence of education along with price/promotion knowledge as the effect of consumer human capital. In consumption, human capital is information and skills (assets) that consumers can use when they choose products or brands. Becker’s theory (2002) emphasizes investment in education to form human capital. Those with higher education have a better cognitive ability to process and organize information and accordingly develop more human capital for consumption activities. We also interpret the positive effect of price/promotion knowledge as that of human capital in consumption which requires continuous updates of market information.

As a post hoc test, we ran the same MANOVA model without the income variable. Instead, income was entered as a covariate to test whether the human capital effect would remain significant after the income effect was controlled. This post hoc analysis yielded nearly identical results in terms of significance of the main and interaction factors tested. This result confirms the strong effect of human capital on proneness to promotions. The insignificant gender and human capital interaction effect also suggests a consistent positive role of human capital in promotion prone behaviors across gender.

Human capital in consumption cannot be obtained in a day. It is formed through repeated shopping experiences. In contrast to the assumption that high-class people use coupons less because of their high opportunity cost, consumers with high income are more prone to respond to sales promotions, because they have more opportunities.

2Responses to this item were reverse coded in calculating the sum scores.
3Multicollinearity diagnostics were run for education and income. Tolerance, Variance Inflation Factor, and Condition Indices suggest no evidence of multicollinearity problems (Garson 2006).
Another contributing factor to the positive effect of human capital and income, contrary to past research findings, reflects various changes brought to the retail industry and environment. Since coupons were first introduced in 1895 by C. S. Post, the producer of ready-to-eat cereals (Blattberg and Neslin 1990), coupons were distributed mainly through newspapers until a couple of decades ago. However, today those are provided in various formats (e.g., clipping coupons/rebates, stand-alone inserts, and email coupons/rebates) through a number of distribution vehicles (e.g., in-store, print media, mass media, coupon books, and coupon/rebate Internet sites). Furthermore, due to the market power shift to retailers from manufacturers, the U.S. retail market has become extremely sales promotion-driven (Belch and Belch 2004). Because of these changes in the retail market, shopping is not a simple chore as it used to be. Maximizing consumption efficiency through various sales promotions requires market knowledge and expertise, which is a form of human capital that is accumulated over time.

Gender difference was significant in deal proneness. Women use coupons more than men do. For rebates, we hypothesized no

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**FIGURE 1**
The interaction effect by shopping enjoyment on the gender–coupon use relation

**FIGURE 2**
The interaction effect by shopping enjoyment on the gender–rebate use relation
gender identity association. Surprisingly, men showed higher use of rebates than women. Because coupons are likely to have female identity, women use coupons more than men do. It would be plausible to interpret this result as an association of rebates with male identity. However, hypothesis testing did not find any significant effect of male gender congruency on the use of rebates. Current literature provides few explanations for men’s greater use of rebates. Mazumdar and Papatla (1995) reported men are more price elastic and affected by shelf prices in stores (rather than coupons), and weigh more on acquisition value than transaction value. The perception of acquisition value may drive the use of rebates, as the redemption does not occur at the moment of purchase, unlike coupons. Therefore, men’s greater use of rebates may not be the result of masculine identity associated with rebates; rather it could be attributed to their greater perception of acquisition value from rebates. However, further investigation on the gender effect on the use of rebates is suggested.

There was an interaction between enjoyment of shopping and gender. Women consistently showed high use of coupons and low use of rebates regardless of the level of shopping enjoyment. However, for men, those who enjoyed shopping more were more prone to promotions, that is, used more coupons and rebates. The effect of shopping enjoyment appears to be more prominent for men. Men might develop a tendency to respond to promotion deals, as they have emotional involvement in shopping, while women’s deal prone behaviors are more consistent regardless of their enjoyment of shopping. This result could be attributed to the traditional gender role that forces women to engage in shopping related activities such as participating in promotions.

We found partial evidence for the gender congruency effect for coupons. As explained in the measurement section, gender congruency was measured by female and male traits. Another post hoc analysis revealed a significant positive correlation of shopping enjoyment to female traits. Therefore, enjoyment of shopping may be associated with female identity. The socio-cultural meaning of shopping should be further explored in relation to psychological gender traits.

A limitation of our study is the use of secondary data, which restricts the development of ideal measures, for example, for price knowledge. However, using secondary data was a way to test demographics, which was one of the main purposes of our study. The goal could not be achieved otherwise. Notwithstanding the limitation, we believe the nature of the data that were collected from an over 3000-participant sample representative of the U.S. population provides external validity for our findings.

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