Too Time-Crunched to Seek Variety
The Influence of Parenting Motivation on Consumer Variety Seeking
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TOO TIME-CRUNCHED TO SEEK VARIETY:
THE INFLUENCE OF PARENTING MOTIVATION ON CONSUMER VARIETY SEEKING

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Too Time-Crunched to Seek Variety:
The Influence of Parenting Motivation on Consumer Variety Seeking

ABSTRACT

Parenting motivation, the inspiration and drive to take care of one’s children, is regarded as a powerful instinct for facilitating human reproduction. In a set of hypotheses, the authors address how, why, and among whom parenting motivation affects a pervasive decision-making tendency, namely variety seeking. Six studies, including a large-scale panel data study and five online and lab studies, show that parenting motivation spurs feelings of time crunch that further result in less variety seeking among consumers. The effect is diminished when time-saving parenting support exists (which reduces feelings of time crunch in parenting), when consumers are led to believe that they have sufficient time available for shopping, or when they do not have much loyalty to any brand offered in the choice set and thus cannot save time by simply choosing the top-of-mind product option. The current research thus contributes to the growing literature on how parenting motivation affects consumer decision making. In addition, it augments the literature on variety seeking by identifying an important factor that can influence it.

Keywords: parenting motivation, variety seeking, feelings of time crunch
Companies treat parent consumers as an important market segment, given the considerable number of consumers in parental roles and the centrality of parenthood in their lives. American parents had approximately 3.79 million babies in 2018 (Centers for Disease Control and Prevention 2020), and nearly 40% of American households have children under 18 years (Statista 2019). Across countries and cultures, parents on average spend up to 150 minutes every day with their children, in addition to time spent on other parenting-related activities (Sani and Treas 2016). Parents are targeted buyers of a wide array of parenting-related products, ranging from diapers to education services, as well as other mundane products (Durante et al. 2015; Jung and Mittal 2021; Liu, Dallas, and Fitzsimons 2019; Mukhopadhyay and Yeung 2010). Thus, marketing cues appealing to parents and portraying parenting activities are common in the marketplace. The demanding nature of parenting leads many parents to experience feelings of time crunch, or the perception of time shortage or time deficit (Szollos 2009), which is often reflected in the ads that target them. For example, Fiat 500L commercials feature a father and a mother making jokes about their busy lives, filled with parenting chores, while the Coca-Cola Life commercial “Parenting” shows parents engage in typical childcare activities with the drink at their side. Interestingly, ads and commercials targeting parents can also trigger thoughts about parenting even among consumers who are not parents (Li, Haws, and Griskevicius 2019). Given the immense size of the parent marketing segment and the ubiquity of parenting-related marketing cues, it is crucial to understand how parenthood, or even just the thought of it, may influence consumer behavior.

The parental role or thoughts about it can lead to parenting motivation—a set of affective and cognitive mechanisms aimed at taking care of the young (Buckels et al. 2015; Griskevicius and Kenrick 2013; Kenrick et al. 2010). Entering into a parental role has been shown to result in profound psychological change (Buckels et al. 2015; Eibach and Mock 2011), and recent
marketing research has just started to explore the implications of this significant life-role transition on consumption behavior (Li, Haws, and Griskevicius 2019; Li and Yan 2021; Shin and Mattila 2021; Su, Monga, and Jiang 2021). Extending this line of research, the current work shows a novel effect of parenting motivation: It makes people feel time-crunched and subsequently decreases variety-seeking behavior within a given product category, which refers to the tendency of consumers to diversify their consumption choices (Haws and Redden 2013; Haws et al. 2017; Huang and Wyer 2015; McAlister 1982; McAlister and Pessemier 1982; Mead, Hardesty, and Scott 2019; Menon and Kahn 1995; Ratner, Kahn, and Kahneman 1999; Zhu and Ratner 2015).

The current research contributes to the literature on variety seeking by unraveling a novel factor that can influence it. Consumers’ tendency to include variety in their choices can be affected by various factors, such as an inherent need for stimulation (Steenkamp and Baumgartner 1992), activation of cognitive concepts related to variety (Maimaran and Wheeler 2008; Shen and Wyer 2010), and the shopping environment (Levav and Zhu 2009; Ratner and Kahn 2002). Little research has studied whether the social roles of consumers can also affect variety seeking (for exceptions, see Etkin 2016 and McAlister and Pessemier 1982 on variety-seeking behavior for romantic partners or family members). The present research adds to this body of literature by showing that a socially defined role, namely parent, and thoughts about it can affect variety-seeking behavior.

Our findings provide novel and seemingly nonintuitive knowledge to marketing practitioners. We hired Qualtrics Research Services to conduct a pilot study and collected responses from 51 North American consumer marketing managers ($M_{age} = 44.51$, 35 males), all of whom indicated that they think parents are an important consumer group and acknowledged variety seeking as an essential factor to consider in designing a marketing mix for this consumer...
These marketing practitioners intuited that parents would be likely to seek variety in their product choices (i.e., “Do you think parents will be more or less variety seeking in their product choices, compared with those who are not parents?” 1 = “much less variety seeking,” and 7 = “much more variety seeking”; M = 5.59, SD = 1.55; difference from scale mid-point of 4: t(50) = 7.31, p < .001, Cohen’s d = 1.02). By contrast, we predicted and showed that parenting motivation decreases variety seeking. Furthermore, we found similar effects even for non-parent consumers who were merely prompted to think about parenting. Such findings thus apply to the effective management of consumers’ variety seeking when a company’s product category or marketing communication is likely to evoke thoughts about parenting.

This article is organized as follows. We first review the literature and develop our predictions about parenting motivation decreasing variety-seeking behavior due to feelings of time crunch. We report the results of six studies conducted to test our hypotheses, including a panel data study that examines the impact of parenthood on consumers’ actual choice of variety, and five online and lab experiments that involve both hypothetical and real choices. We conclude by discussing the theoretical and managerial implications of the present findings.

**THEORETICAL BACKGROUND**

**Parenting Motivation and Time Crunch**

Parenthood is a significant life milestone that influences people’s behaviors in profound ways. The impacts of becoming a parent often stem from the parental-care motivational system, a set of affective and cognitive mechanisms associated with caretaking of the young (Buckels et al. 2015; Griskevicius and Kenrick 2013; Kenrick et al. 2010). For example, as mothers typically focus more on fulfilling children’s immediate needs while fathers focus more on acquiring
resources to meet children’s future needs, parenting motivation leads females to become more present-focused and males more future-focused in intertemporal decisions (Li, Haws, and Griskevicius 2019). The parental-care motivational system has been referred to as “the most powerful instinct” (McDougall 1908, p. 68) that evolved for parental care of offspring to facilitate reproduction (Buckels et al. 2015), and it predisposes people to think in a parental role. Of note, research indicates that parenting motivation can potentially be activated in all human adults, regardless of their parental status (Gilead and Liberman 2014). For example, parenting motivation can be induced even among non-parents with stimuli evoking cognitions and actions related to parenting and caregiving, including *kindchenschema*, or infantile physical features (Li, Haws, and Griskevicius 2019), infant voice messages (Shin and Mattila 2021), and parenting-activity-related product images (Li and Gong 2018). Prior research indicates that parenting motivation can have important implications for people’s caregiving and interpersonal relationships (Shin and Mattila 2021), risk attitudes (Kerry and Murray 2019), future versus present focus (Li, Haws, and Griskevicius 2019), and money-saving motives (Canova, Rattazzi, and Webley 2005), which further influence behavior in various domains, such as social perceptions (Eibach and Mock 2011), moral judgments (Buckels et al. 2015), financial planning (Lee, Hanna, and Siregar 1997), and even political attitudes (Kerry and Murray 2018; see Table 1 for a literature summary of the measurements, psychological mechanisms, and consequences of parenting motivation). Whereas very little prior research has explored the influence of parenting motivation on consumer behavior (for an exception, see Li, Haws, and Griskevicius 2019), the current research identifies feelings of time crunch as an underlying psychological mechanism activated by parenting motivation that has implications for a significant consumer decision-making tendency—that is, variety seeking.
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<td>Sherman et al. (2013)</td>
<td>Human Behavior</td>
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<td>Feelings of tenderness, desire to protect</td>
<td>Cute infant images increased people’s carefulness in their behavior.</td>
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<td>Buckels et al. (2015)</td>
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<td>(Measured) Parental Care and Tenderness (PCAT) score</td>
<td>Feelings of tenderness</td>
<td>PCAT scores predicted tender emotions aroused by infant faces. In addition, PCAT scores were positively associated with a greater tendency to perceive baby-faced adults in a more favorable way.</td>
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<tr>
<td>Li and Gong (2018)</td>
<td>Interpersonal Relationship</td>
<td>(Measured) Study 1: Parental Care and Tenderness (PCAT) score; (Manipulated) Study 2A: Parenting-activity-related product images (e.g., stroller, milk bottle) (Manipulated) Study 2B: Parental-status-related questions to make parental role salient</td>
<td>Interpersonal connectedness</td>
<td>Parental-role salience increased the perceived connection with others, thus leading to an interdependent self-construal.</td>
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<td>Shin and Mattila (2021)</td>
<td>Prosocial Behavior</td>
<td>(Manipulated) Studies 1, 3, and 4: Infant images Study 2: Infant laugh audio clips</td>
<td>Kama muta</td>
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<td><strong>Risk Attitude</strong></td>
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<td>Eibach and Mock (2011)</td>
<td>Social Perception</td>
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<td>Parents perceived greater risk, made more risk-averse choices, and trusted strangers less when their parental role was salient.</td>
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<td>Social Perception</td>
<td>(Measured) Study 1: Chronic parental status Study 2: Accompanying their children</td>
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<td>Parents evaluated a stranger as more threatening than non-parents.</td>
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<td>Gilead and Liberman (2014)</td>
<td>Social Perception</td>
<td>(Manipulated) Study 1: Asking participants to describe the first few days after giving birth to their first child; (Manipulated) Study 2: Exposure to infant pictures; (Measured) Study 3: Accompanying their infants</td>
<td>Protection intention</td>
<td>Activation of the caregiving system enhanced bias against out-groups whenever their members posed a salient threat.</td>
</tr>
<tr>
<td>Buckels et al. (2015)</td>
<td>Moral Judgment</td>
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<td>Kerry and Murray (2018)</td>
<td>Moral Judgment, Political Attitudes</td>
<td>(Measured) Studies 1 and 3: Chronic parental status; (Measured) Study 2: Parental Care and Tenderness (PCAT) score</td>
<td>Risk avoidance Parenting motivation led to more moral vigilance and more social conservatism.</td>
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<tr>
<td>Li and Liu (2018)</td>
<td>Intertemporal Choice</td>
<td>(Manipulated) Parental status-related questions to make parental role salient</td>
<td>Risk aversion Parental-role salience led to more impatience.</td>
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<tr>
<td>Kerry and Murray (2019)</td>
<td>Political Attitudes</td>
<td>(Measured) Parental Care and Tenderness (PCAT) score</td>
<td>Sexual attitude, perceived threats Parenting motivation led to social conservatism.</td>
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<tr>
<td>Li and Yan (2021)</td>
<td>Risk Perception</td>
<td>(Manipulated) Studies 1 and 4: Infant pictures</td>
<td>Risk perception Given that men (women)’s responsibilities in parenting are associated with more risk seeking (risk avoidance), parenting motivation led men to be more risk-seeking and women to be more risk-averse in general.</td>
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<td><strong>Future-focused versus Present-focused</strong></td>
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<tr>
<td>Li, Haws, and Griskevicius (2019)</td>
<td>Intertemporal Choice</td>
<td>(Manipulated) Infant pictures</td>
<td>Future-focused versus present-focused Parenting motivation led men to be more future-focused and women to be more present-focused, which resulted in gender differences in intertemporal decisions (preference for smaller, immediate rewards vs. larger, future ones) and attitudes for marketplace entity with inherent temporal tradeoffs (rent-to-own businesses).</td>
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<td><strong>Money-saving Motive</strong></td>
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<td>Canova, Rattazzi, and Webley (2005)</td>
<td>Financial planning</td>
<td>(Measured) Chronic parental status</td>
<td>Money-saving motive Parents’ money-saving motive is linked with a series of goals that are hierarchically ranked (e.g., to manage unforeseen household expenses for the children).</td>
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<tr>
<td>Lee, Hanna, and Siregar (1997)</td>
<td>Financial planning</td>
<td>(Measured) Chronic parental status</td>
<td>Money-saving motive More educated parents are more likely to have college saving as a goal than otherwise similar less educated parents.</td>
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<td><strong>The Current Research</strong></td>
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<tr>
<td>Consumer Decision Making</td>
<td></td>
<td>(Measured) Study 1: Within-household comparison between before vs. after parenthood; (Manipulated) Studies 2, 3 and 5A: Exposure to infant pictures; Study 4: Exposure to a video featuring parenting activities; Study 5B: Recalling and describing a typical day when they take care of children.</td>
<td>Feelings of time crunch Parenting motivation spurs feelings of time crunch, which further results in less variety seeing.</td>
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Among all the challenges that parenthood brings, one of the most prominent is increased
time demands. Parents need to spend time on activities such as nurturing their young children,
reading and talking to them, taking them to school, and preparing their meals, each of which
requires a considerable time investment. Longitudinal studies show that the time parents in
industrialized countries spend on childcare has increased steadily over the last few decades
(Gauthier, Smeedeng, and Furstenberg 2004), with “intensive parenting”—intensive time
investment in hands-on childcare—being the norm since the 1990s (Miller 2018). In fact,
parenting is such a time-consuming task that after people transition to parenthood, time becomes a
precious commodity that is difficult to balance between parenting with other important activities.
Sayer (2018), for instance, found that people have less time for non-parenting-related activities
after becoming parents.

Parents readily perceive the time demanded by the parental role. People who are parents
tend to perceive greater feelings of time crunch in life than those who are not parents (Reeves and
Szafran 1996; Zuzanek 1998). This increased perception of time crunch is particularly salient
during the first several years of parenthood, as new parents need to engage in various activities
(e.g., feeding, bathing, coaxing to sleep, comforting, and playing) that are extremely time
consuming (Ruppanner, Perales, and Baxter 2019). In addition, although people accumulate
parenting experience with their first child, they face increased time pressure when they have a
second child (Ruppanner, Perales, and Baxter 2019). Time-crunched parenting is common across
various cultures and countries (Sani and Treas 2016), and the expressions “time crunch,” “time
squeeze,” and “time famine” have routinely been used in mass media to characterize people’s
feelings about parenting, especially young children (Bunting 2000; Daly 2000).

Given such a strong association between parenthood and time crunch, we thus predict that
parenting motivation can trigger feelings of time crunch, with subsequent implications for
consumers’ variety-seeking behavior. We elaborate the rationale for this prediction below.

*Time Crunch and Variety-Seeking Behavior*

Variety-seeking behavior can be driven by various motivations induced by situational factors. For example, individuals who crave sensation may seek variety because it triggers psychological stimulation (Steenkamp and Baumgartner 1992). Consumers in a crowded or spatially confining environment make more varied choices to regain a sense of freedom (Levav and Zhu 2009). Consumers are also more likely to include variety in their choices in public (vs. private) consumption contexts because they are motivated to appear adventurous and open-minded (Ratner and Kahn 2002).

Based on a stream of research indicating how consumers’ time may affect their shopping behavior, we conjectured that enhanced feelings of time crunch caused by parenting motivation have spillover effects on variety seeking. Consumers with ample time to shop in a store are more likely to browse, explore alternatives, and purchase a greater variety of products (Mohan, Sivakumaran, and Sharma 2012); similarly, those who tend to spend prolonged time contemplating product choices include more variety in their choices (Beatty and Ferrell 1998; Jeong, Christensen, and Drolet 2016). Conversely, when consumers are under time pressure, they tend to pick the most salient options in their memory (Iyer 1989) and minimize time spent learning about additional options (Xu and Kim 2008), which may result in less choice of variety. Indeed, with time constraints, people are only able to screen options in a large assortment based on a limited number of attributes, leading to fewer alternatives in their final choice set (Weenig and Maarleveld 2002). Relatedly, time crunch helps people better remember information about options acquired earlier (Kruglanski and Freund 1983) and in turn enhances their preference for the status quo and a reluctance to vary among other options (Eidelman and Crandall 2009; Woodside and Uncles 2005). Consistent with these findings, other researchers observed that time
pressure predisposes decision makers to stick with familiar options rather than exploring new ones (Litt et al. 2011). These results suggest that time crunch can decrease variety seeking.

The Current Research

We hypothesize that people experience greater feelings of time crunch when parenting motivation is activated, either by their actual identity as parents or merely by having thoughts about parenting (Bleidorn et al. 2013; Oechsle and Zoll 1991). As time crunch has been shown to dampen the tendency to choose variety (Erdem 1996; Fishbach, Ratner, and Zhang 2011; Kivetz, Urminsky, and Zheng 2006; Menon and Kahn 1995), we predict that parenting motivation will decrease variety-seeking behavior. Stated formally:

H1: Parenting motivation tends to decrease consumer variety-seeking behavior.

H2: The effect of parenting motivation on variety-seeking behavior is mediated by enhanced feelings of time crunch.

There may be qualifications regarding the effect of parenting motivation on variety-seeking behaviors. Because time-crunched parenting is a pressing social issue, many support programs and products have been developed to help parents save time (Sani and Treas 2016; Smith et al. 2016). When people think of these means of saving time in parenting, time crunch may become less of a problem for them, and the effect of parenting motivation on variety seeking should be reduced. Stated formally:

H3: The effect of parenting motivation on variety seeking is weakened when people believe that they can receive parenting support that helps them save time.

Our conceptualization predicts that people engage in less variety-seeking behavior when parenting motivation is activated because they experience greater feelings of time crunch that discourage the choice of variety (Iyer 1989; Litt et al. 2011). If that is the case, then leading
people to believe that they have ample time for shopping should lessen the perception of time crunch and thus weaken the effect of parenting motivation on variety seeking. Stated formally:

H4: The effect of parenting motivation on variety seeking is weakened when people are led to believe that time is readily available to them.

Finally, our theorizing predicts that parenting motivation decreases variety seeking because enhanced feelings of time crunch inhibit consumers from exploring alternative options and make them more likely to simply choose the default product option most salient in their mind, based on their prior product consumption or usage. Brand loyalty—defined as biased behavioral responses toward one brand expressed over time due to psychological commitment or emotional connections to the brand (Jacoby and Chestnut 1978; Jacoby and Kyner 1973)—can influence consumers’ default choice. In real marketing practice, established brands tend to enjoy more brand loyalty among consumers and thus are motivated to discourage variety-seeking behavior, whereas new market entrants often aim to encourage consumers to seek variety and try new brands. Such differences in marketing strategies lie in the fact that consumers who are highly loyal to a brand tend to treat it as a default option (Tellis 1988). Thus, the effect of parenting motivation on variety seeking should be mitigated among those who do not have much loyalty to any brands offered in the product category and hence do not have any top-of-mind product choice, because they cannot save time by simply choosing the default option. Stated formally:

H5: The effect of parenting motivation on variety seeking is diminished when consumers do not have much brand loyalty toward any of the product options.
OVERVIEW OF STUDIES

We test these hypotheses in six studies, the results of which are summarized in Table 2. To obtain real-world evidence for our proposed effect of parenting motivation on variety seeking, Study 1 uses a within-subject, longitudinal design involving NielsenIQ panel data to illustrate that the same consumer chose less variety in multiple product categories after becoming a parent than before. Study 2 establishes the causal relationship between parenting motivation and variety-seeking behavior by inducing parenting motivation, and provides direct support for our proposed mechanism based on feelings of time crunch. Studies 3–5 are conducted among pure non-parents (i.e., Studies 3, 4, and 5A) or pure parents (i.e., Study 5B) to tightly control for impacts of actual parental status and demonstrate that the effect on variety seeking occurs when thoughts about parenting are induced without the interference of chronic parental status. These studies shed additional light on the mechanism with a moderation-of-process approach. Study 3 shows that the effect diminishes when consumers perceive that abundant support is available to help them with various parenting chores, which reduces feelings of time crunch. It also provides additional evidence for our proposed mechanism by exploring participants’ listed thoughts related to feelings of time crunch. Studies 4, 5A, and 5B offer further evidence for the proposed mechanism by showing that the effect of parenting motivation on variety seeking is weakened when consumers are led to perceive time abundance in their shopping trips (Study 4) or lack loyalty toward the brands in the choice set (Studies 5A and 5B). The sample size of each study is determined in advance based on the sample sizes in published studies using similar methods and procedures.
TABLE 2  SUMMARY OF RESULTS BY STUDY CONDITION

<table>
<thead>
<tr>
<th>Study</th>
<th>Description</th>
<th>N Participants</th>
<th>DV</th>
<th>Condition</th>
<th>Mean (SD)</th>
<th>p-value</th>
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<tr>
<td>Study 1: Demonstration of the parenting motivation effect in secondary data (N = 791,792)</td>
<td>The ratio of unique UPCs (Universal Product Code) in a category out of all the products purchased in that category per shopping trip.</td>
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<td>DV:</td>
<td>People engaged in less variety seeking in their shopping trips after entering into parenthood than before.</td>
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<td>Study 2: Manipulation of parenting motivation influences alcoholic-beverage choice (N = 458, 149 males, 193 parents, Prolific workers)</td>
<td>Variety seeking in alcoholic-beverage choice</td>
<td>Parenting Active Control Inactive Control</td>
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<td>Participants with an activated parenting motivation displayed less variety seeking than those in the active control condition and the inactive control condition (F(2, 455) = 3.59, p = .029; non-parametric test: χ²(2) = 7.05, p = .030).</td>
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<td>Study 3: Moderation effect of availability-of-parenting-support (N = 470, 122 males, none parents, undergraduate students)</td>
<td>Variety seeking on ballpoint pen choice</td>
<td>Parenting Parenting-with-Support Control</td>
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<td>The effect of parenting motivation on decreased variety seeking was attenuated when abundant parenting support is available (F(2, 467) = 5.05, p = .007; non-parametric test: χ²(2) = 9.55, p = .008).</td>
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<td>Study 4: Moderation effect of time availability (N = 607, 171 males, none parents, undergraduate students)</td>
<td>Variety seeking on hand-soap choice</td>
<td>Baseline</td>
<td>Time-Available</td>
<td>Parenting</td>
<td>Control</td>
<td>Parenting</td>
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<td>The effect of parenting motivation on decreased variety seeking was replicated in baseline conditions, and attenuated when participants were led to feel that they had enough time for shopping trips (interaction of motivation and time availability: F(1, 603) = 5.05, p = .025; non-parametric test: χ²(1) = 5.04, p = .025).</td>
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<tr>
<td>Study 5A: Moderation effect of self-brand connection (N = 596, 193 males, none parents, undergraduate students)</td>
<td>Variety seeking on shampoo brand</td>
<td>Self-Brand Connection &gt; 2.62</td>
<td>Self-Brand Connection &lt;= 2.62</td>
<td>Parenting</td>
<td>Control</td>
<td>Parenting</td>
</tr>
<tr>
<td></td>
<td>The effect of parenting motivation on decreased variety seeking was replicated at high and medium levels of self-brand connection, and mitigated when self-brand connection was low (interaction of motivation and self-brand connection: t(592) = -2.82, p = .005; non-parametric test: χ²(1) = 6.92, p = .009).</td>
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<tr>
<td>Study 5B: Moderation effect of brand attachment (N = 863, 349 males, none parents, undergraduate students)</td>
<td>Variety seeking on fabric softener brand</td>
<td>Brand Attachment &gt; 3.72</td>
<td>Brand Attachment &lt;= 3.72</td>
<td>Parenting</td>
<td>Control</td>
<td>Parenting</td>
</tr>
<tr>
<td></td>
<td>The effect of parenting motivation on decreased variety seeking was replicated at high and medium levels of brand attachment, and mitigated when brand attachment was low (interaction of motivation and brand attachment: χ²(1) = 5.80, p = .016).</td>
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</table>

Notes: Standard deviations are in parentheses. We also examined the percentage of participants “taking-all-of-one-choice” or “taking-one-of-each-choice” across Studies 2 - 4 and Study 5A (and not Study 5B, in which variety seeking was measured by the binary decision to choose a new option; Web Appendix E).
STUDY 1: PANEL DATA ANALYSIS

Using secondary data of actual purchases and consumer parental status, Study 1 aims to find evidence of a causal relationship between parenting motivation and variety seeking by comparing consumers’ purchasing behavior before and after they become parents. We expect that they will purchase less varied products after, as compared to before, becoming parents (H1). It is challenging to draw causal relationship across individuals because their parental status is not randomly assigned and thus cross-sectional variation in parental status may be confounded by individual characteristics that may also affect variety seeking. Therefore, our approach relies on the within-individual variation in parental status and a difference-in-difference (DiD) design to control for both individual characteristics and temporal factors related to variety seeking.

Sample and Summary Statistics

We use the NielsenIQ consumer panel dataset, a longitudinal panel of U.S. households that provided their consumption information to NielsenIQ from 2004 to 2015. The data contain every shopping trip for the panelist, including the date (but not the exact timing) and every purchase record of the trip. The data also contain demographic information, including the number of children, for each household on a yearly basis. Thus, the observed change of parental status for a given household provides the basis of our within-subject identification strategy.

To focus on the effect of changing from non-parent to parent, we include only households satisfying the following two conditions: (1) they did not have children at the

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1 Researcher(s) own analyses calculated (or derived) based in part on data from Nielsen Consumer LLC and marketing databases provided through the NielsenIQ Datasets at the Kilts Center for Marketing Data Center at The University of Chicago Booth School of Business. The conclusions drawn from the NielsenIQ data are those of the researcher(s) and do not reflect the views of Nielsen. Nielsen is not responsible for, had no role in, and was not involved in analyzing and preparing the results reported herein.
beginning of the data period and (2) they had children during the data period. Becoming a parent is a critical life decision and thus a highly endogenous choice. We focus on these households because they all experienced a change of parental status during the data period. We believe such a sample selection rule is helpful to our identification strategy, which will be discussed later.

To focus on the effect of parenting motivation on variety seeking, we select several product categories based on two principles. First, the products are primarily for general consumer decision making and not limited to parenting activities, i.e., their consumption is less affected as a direct consequence of parenthood. Second, the products are typically grouped in assortments with a number of selections placed in close proximity to one another, providing an appropriate context to test for variety seeking. We list the products in Table W1 of Web Appendix A. Most of them are common choices in the variety-seeking literature (Fishbach, Ratner, and Zhang 2011; Gullo et al. 2019; Huang et al. 2019; Levav and Zhu 2009; Trivedi 1999; Mittelman et al. 2014).

Following Gullo et al. (2019), we pull all categories together in the analysis among shopping trips with purchase of the focal categories. An observation in the analysis is a combination of household, shopping trip, and category. The final estimation sample contains 1,511,092 observations generated by 887,648 shopping trips of 2,049 households. We report the summary of each category in Table W1 of Web Appendix A. Carbonated Beverages is the largest category, followed by Candy. In terms of the percentage of trips with multiple purchases (i.e., more than one item was purchased), yogurt, frozen dinners, and carbonated beverages are the most frequent, while table syrups, ketchup, lotion, and shampoo are the least frequent. In the estimation sample, a household has an average of 6.49 years of observations, with 2.68 and 3.81 years for pre- and post-parent status. Households slightly decrease their shopping frequencies and spending (for the focal categories) after becoming
parents, with 5.74 and 5.09 trips per month pre- and post-parent, and expenditures of $53.26 and $51.78 per month pre- and post-parent. We also report the demographic distributions in Table W2 of Web Appendix A.

Identification

Our identification follows the difference-in-difference (DiD) approach. First, since becoming a parent is among the most consequential lifetime decisions, it is possible that parental households are different from non-parental households even after controlling for the observed characteristics. In other words, since parental status is not randomly assigned, parents and non-parents could be different in unobserved dimensions. Therefore, our sample focuses on those with observed change of parental status, and the identification relies on within-household comparison, i.e., the change of variety seeking before and after becoming a parent. Second, although such within-household change is revealing for the impact of parenting motivation, it is confounded by the general time trend in consumption. With DiD, we aim to compare the difference before and after becoming parents for a given household relative to the difference before and after the same time point for other control households—the difference-in-difference—to capture the “pure” parenting motivation effect. Intuitively, the first difference captures both the effect of parenting motivation and other temporal effects on variety seeking that are not related to the change of parental status, while the second difference captures only the temporal effects. Following the literature (Datta, Knox, and Bronnenberg 2018; Manchanda, Packard, and Pattabhiramaiah 2015), we exploit the variation in timing of becoming parents in our sample to use the late-parental households as a control for the early-parental households. Specifically, consider an early-parental household who become parents at $t$ and a late-parental household who become parents at $t + T$. Then the parenting motivation effect can be identified by comparing the difference in variety seeking between the early- and late-parental households in periods $[0, \ldots, t - 1]$ with the difference in
their variety seeking in periods \([t, \ldots, t + T - 1]\).\(^2\)

**Model**

Following prior studies (Gullo et al. 2019; Levav and Zhu 2009), we measure variety seeking as the ratio of unique UPCs (Universal Product Code) in a category out of all the products purchased in that category per shopping trip. UPC is the most basic level of information available, and it distinguishes among such factors as brands, products within a brand, and package sizes. The variety seeking of household \(i\) in category \(C\) for shopping trip \(t\) is defined as follows:

\[
\text{var}_{iCt} = \frac{\sum_{j \in C} 1(j \in B_{it})}{\sum_{j \in C} q_j \cdot 1(j \in B_{it})},
\]

where \(j\) denotes product, \(B_{it}\) is the shopping basket for household \(i\) in trip \(t\), and \(q_j\) is the quantity purchased for product \(j\). For example, purchasing two packs of strawberry yogurt and two packs of vanilla yogurt yields a variety measure of .5. We develop the regression model as follows:

\[
\text{var}_{iCt} = \delta \cdot 1(\text{Parent})_{it} + \text{CatWeek}_{iCt} + \text{DayofWeek}_{it} + \text{DayofMonth}_{it} + \text{CatQuant}_{iCt} + \text{TripQuant}_{it} + \text{Demo}_{it} + \alpha_{iC} + \epsilon_{iCt}.
\]

\(1(\text{Parent})_{it}\) is a dummy variable for whether or not household \(i\) is in parental status during shopping trip \(t\). It is the main variable of interest. \(\text{CatWeek}_{iCt}\) is the category-specific calendar-week fixed effect. As discussed earlier, these calendar-week fixed effects capture the general time trend in variety seeking that would confound our measurement of the parenting-motivation effect if not controlled for. Since such time trends may vary across categories, we allow them to be category-specific. Thus, the coefficient \(\delta\) of \(1(\text{Parent})_{it}\) captures the parenting-motivation effect on variety seeking after controlling for the category-

\(^2\) For each household in the sample, their control households are those who became parents later than the focal household. On average, a household has 897 control households in our sample.
specific temporal effect, i.e., the DiD estimate. In addition, shopping schedules may change due to the change in parental status. Thus, we control for the day-of-week dummies with $DayofWeek_{it}$ and the day-of-month dummies with $DayofMonth_{it}$.

Furthermore, the shopping basket size could be associated with parental status. Therefore, we control for the quantity fixed effects. Specifically, $CatQuant_{i,Ct}$ is the fixed effect for purchase quantity in category $C$, which captures the basket size for the particular category. $TripQuant_{it}$ is the fixed effect for purchase quantity in the trip, which captures the basket size for the trip.

Because a household’s demographics can change due to the change of parental status, we control for an extensive set of demographic variables in $Dem_{it}$.

Since different households may have different intrinsic preference for variety seeking in each category, we control for the household-category fixed effect $\alpha_{inc}$. Such a fixed effect ensures that the estimated parenting-motivation effect is not due to systematic differences in variety seeking across households and categories. Finally, $\epsilon_{i,Ct}$ is the random-error term.

Results

The estimate of $\delta$ is of primary interest, as it represents the parenting effect on variety seeking after controlling for other potentially confounding factors. The main result is presented in column 2 of Table 3. We included only observations with purchase quantity in the focal category greater than 1. When the quantity is 1, the dependent variable is also 1 without any randomness, thus yielding a potentially biased model. Nevertheless, for completeness, we included such cases in column 1, as well as cases for quantity greater than 2 and 3 in columns 3 and 4 of Table 3. The results show that the key coefficient—that of 1

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3 Due to data limitations, we could not observe time-of-day in this study. Nevertheless, the effect of parenting motivation on variety seeking was still observed when all the data were collected at the same time of day in the subsequent Study 2; thus, we believe that the effect is robust even after controlling for time of day.

4 We control for all demographic variables available in the NielsenIQ dataset, including county, income, type of residence, education, age, employment status, occupation, household size, marital status, type of kitchen appliances, presence of TV and type of cable TV, and internet connection.
(Parent)—is significantly negative in all cases. This offers supportive evidence for H1 that parenting motivation can lead to less variety seeking.

**TABLE 3 STUDY 1: DiD ESTIMATES OF VARIETY SEEKING FOR PARENTING**

<table>
<thead>
<tr>
<th></th>
<th>All Trips</th>
<th>Trips With Quantity &gt; 1</th>
<th>Trips With Quantity &gt; 2</th>
<th>Trips With Quantity &gt; 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1(Par)</td>
<td>-.0048***</td>
<td>-.0085***</td>
<td>-.0098***</td>
<td>-.0099***</td>
</tr>
<tr>
<td></td>
<td>(.0013)</td>
<td>(.0022)</td>
<td>(.0028)</td>
<td>(.0031)</td>
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</tbody>
</table>

Fixed Effects:
- Household-category: Y Y Y Y
- Category-week: Y Y Y Y
- Category Quantity: Y Y Y Y
- Basket Quantity: Y Y Y Y
- Day of Week: Y Y Y Y
- Day of Month: Y Y Y Y
- Demographics: Y Y Y Y

R²: .6823 .5147 .5476 .5491
N_{obs}: 1,511,092 791,792 440,790 302,531

Note: *, **, and *** represent 10%, 5%, and 1% significance level, respectively. S.E. are clustered at the household level.

The DiD analysis relies on the assumption that pre-parental trends of variety seeking are parallel for parents and would-be parents. Since our sample selection criterion ensures the selected households are relatively homogeneous—that is, they all became parents at some point during the sample—we believe this assumption is reasonable in this case. Nevertheless, following the literature (Wang and Goldfarb 2017; Wang, Xiong, and Yang 2019), we formally conduct the falsification check to examine this assumption with the inclusion of pre-parental periods in the analysis. In addition to the variables in the main analysis, we include three dummies for 1 year, 2 years, and 3 years prior to the household’s first parental year. The baseline is more than 3 years before the first parental year. For the DiD analysis to be valid, there should be common pre-parental trends in variety seeking, so the coefficients of the three additional dummies should not be significant. As shown in Table W3 of Web Appendix A, the coefficients of the additional dummies are not significant and their magnitudes are much smaller than the key coefficient.

**Robustness Checks**

We further conduct several robustness checks. First, we consider alternative
definitions of variety seeking. We consider the number of unique UPCs as the measure of
variety seeking. A potential concern of such a measure is that it may inflate variety seeking
when households simply buy more items. Although the inclusion of basket size in the
regression ameliorates this concern, we believe our main measure (i.e., ratio of unique UPCs
to purchase quantity) is more appropriate because it is adopted by the literature (Gullo et al.
2019; Levav and Zhu 2009). Nevertheless, column 1 of Table W4 in Web Appendix A shows
that the result is robust to this alternative definition. While the main analysis examines
variety seeking at the UPC level, we also explore it at the brand level. Specifically, we use
the ratio of unique brands purchased to the number of items bought within the focal category
in a trip as the dependent variable. The result, reported in column 2 of Table W4 in Web
Appendix A, indicates that our finding is robust. We further investigate variety seeking from
an alternative angle similar to that of Kahn and Raju (1991). Specifically, we consider two
alternative dependent variables: whether there is a UPC in the current shopping basket that
was not bought during the last shopping trip that identifies a purchase in the focal category,
and the percentage of UPCs in the current basket that were not bought during the last
shopping trip from the focal category. Similar to Gullo et al. (2019), we treat households as
less variety seeking when these two variables are smaller. The results, reported in columns 3
and 4 of Table W4 in Web Appendix A, show that our finding is robust.

Second, we consider an alternative definition of category. The NielsenIQ data first
classify products into product group (upper level) and then product module (lower level). For
example, pet food is a product group at the upper level. Under pet food, wet cat food and dry
cat food are two product modules. In the main analysis, categories are mostly defined at the
product group level. We replicate the main analysis with product module as the definition of
category. The result, reported in column 5 of Table W4 in Web Appendix A, confirms that
the main finding is robust.
Last, although the categories in our analysis are common in the variety-seeking literature, and we believe their consumption is unlikely to be affected as a direct consequence of being parents, it is challenging to completely rule out this possibility. Therefore, we conduct robustness analyses to test whether a particular category drives the main finding. Specifically, we replicate the main analysis with the exclusion of a category one by one. We report the results in Table W5 in Web Appendix A. For example, row 1 of Table W5 reports the result with the Candy category excluded. The results indicate that our main finding is not driven by any single product category.

Discussion

Using secondary data, Study 1 provides strong evidence for the external validity of the effect of parenting on variety seeking (H1). Specifically, we applied the DiD approach based on the parental status change within a household to identify the causal effect of parenting on variety seeking for a number of categories. The main finding is robust to alternative definitions of variety seeking and product category, and it is not driven by any single product category.

While Study 1 demonstrates the predicted effect in a robust and highly marketing-relevant manner, the nature of the panel data does not allow direct tests of the underlying mechanism based on feelings of time crunch. To this end, we conducted a follow-up supplementary study in which 84 participants (M$_{age} = 33.86$, 37 males), all of them parents, were asked about their change in purchasing habits after becoming parents. They reported that their time spent purchasing products in the categories covered in Study 1 significantly decreased after they entered parenthood (“To what extent has the amount of time you have to purchase this type of product changed after you became a parent?” 1 = “has decreased a lot,” and 7 = “has increased a lot”; M = 3.20, SD = 1.50, difference from the scale midpoint of 4: t(83) = -4.89, p < .001, Cohen’s d = .53). This result is consistent with our theorizing that
people with parenting motivation experience time crunch. In the following studies, we examined the process based on feelings of time crunch.

**STUDY 2: MANIPULATED PARENTING MOTIVATION**

Study 2 has several objectives. First, it aims to provide further experimental evidence for the effect of parenting motivation on variety seeking with an established manipulation of parenting motivation (e.g., Li, Haws, and Griskevicius 2019). Specifically, viewing *kindchenschema* (baby schema; Lorenz 1943)—a set of infantile features including a large head, big eyes, and round forehead—can induce cognitions and actions related to caregiving regardless of people’s actual parental status (Gilead and Liberman 2014; Sherman, Haidt, and Coan 2009). Thus, following a procedure used in prior research (Li, Haws, and Griskevicius 2019), we situationally activate parenting motivation in Study 2 by having participants view a set of human infant faces and imagine that one of them is their baby.

Second, to better localize the causation, we add two control conditions: an “inactive” control condition that does not include any manipulation materials and an “active” control condition with neutral filler materials of the same length as that of the parenting-motivation manipulation (Higgins and Green 2011). Specifically, in the “active” control condition, participants are exposed to a set of adult faces and imagine that one of them is their friend. By activating such a friendship orientation, the “active” control condition could help demonstrate that the effect of parenting motivation cannot be generalized to another interpersonal context.

Third, Study 2 was intended to shed light on the process. We predicted that consumers with activated parenting motivation tend to engage in less variety-seeking behavior due to
feelings of time crunch, given that substantial time investment is required by various parenting chores. We thus directly test the mediational role of feelings of time crunch (H2).

Fourth, we evaluate possible alternative accounts for the effect of parenting motivation on variety seeking. For example, as consumers might engage in variety-seeking behavior to fulfill their desire for novelty (McAlister 1982), thinking about parenting could offer sufficient novelty that weakens people’s desire for novelty in ordinary everyday product choices, thus reducing variety seeking. In addition, prior research suggests that positive emotions can sometimes lead to decreased variety seeking (Roehm and Roehm 2004) and that viewing cute infant faces and imagining oneself becoming a parent might induce positive emotions (e.g., joy, excitement). We evaluate whether desire for novelty or affect could explain the effect in this study.

Finally, Study 2 aims to further demonstrate the robustness of the effect in a laboratory setting by investigating whether the effect persists after controlling for demographic variables including age, gender, working status, and actual parenting status.

Method

Participants and design. Four hundred and fifty-eight U.K. participants (M_age = 36.26, 149 males, 193 parents; gender and parental status splits did not vary across different experimental conditions, χ²s(2) < 4.19, ps > .10) were recruited from Prolific Academic and completed the study for a small monetary compensation. Participants were randomly assigned to one of three between-subjects conditions (motivation: parenting vs. active control vs. inactive control).

Procedure. Following prior research, kindchenschema (i.e., human infant face) was used to induce parenting motivation (Brosch, Sander, and Scherer 2007; Glocker et al. 2009; Li, Haws, and Griskevicius 2019). Specifically, in what was presented as an imagination task, participants in the parenting-motivation condition viewed a set of 12 images of baby faces of
different ethnicities. They were instructed to select one baby that looked most like he/she could be their child and to elaborate on what it might be like to spend a typical day taking care of the baby as their parent. A parallel imagination task was included in the active control condition. However, instead of viewing baby faces and imagining being a parent to one of them, participants in the active control condition were asked to imagine making a friendship with someone. They were presented with a set of 12 images of adult faces of different ethnicities with mixed genders and were asked to choose one person who looked most like he/she could be their new friend. Participants then wrote about what it could be like to spend a typical day with this person and make friends with him/her (Web Appendix B). Those in the inactive control condition skipped the imagination task. A pretest conducted among a separate group of participants (N = 141) indicated that the manipulation conditions did not influence affective state (Web Appendix C).

After that, all participants were asked to complete an ostensibly unrelated alcoholic-beverage choice task to measure their variety seeking (Huang and Wyer 2015; Kahn and Isen 1993; Menon and Kahn 1995), which required imagining that they could select one of four alcoholic-beverage brands in each of four consecutive weeks. Four alcoholic-beverage brands sold in the U.K. were selected: Hardys, Barefoot, Meguigan, and Yellowtail. The participants were instructed to choose their preferred brand sequentially for each week, and they could select any combination of brands across the four weeks. The number of different brands chosen served as an index for variety seeking along a four-point scale, with 1 representing no variety seeking and 4 representing maximum variety seeking. As we predicted that parenting motivation makes consumers feel time-crunched for other activities including shopping, all participants were asked to indicate how well the five items about perceived time crunch in shopping described them (i.e., “I must rush if I am to complete my shopping trip on time,” “I feel pressured to complete my shopping quickly,” “I do not have enough time to shop,” “I
must hurry to complete my shopping on time,” “There are other things I need to be doing right now”; 1 = “strongly disagree,” and 7 = “strongly agree”; \( \alpha = .93 \); Herrington and Capella 1995; Vermeir and Van Kenhove 2005). Then, participants were asked to respond to a 10-item scale measuring desire for novelty (e.g., “I wish something new and exciting would happen,” “I feel that life is boring,” “I wish for some major change in my life”; 1 = “strongly disagree,” and 7 = “strongly agree”; \( \alpha = .87 \); Pearson 1970). They also responded to an eight-item affect scale (e.g., “I feel good,” “I feel pleasant,” “I feel sad” (reverse-coded); 1 = “not at all,” and 7 = “extremely”; \( \alpha = .96 \); Williams, Davies, and Chadury 2000). At the end of the study, participants indicated their age, gender, work status, and whether or not they were parents.

**Results**

**Variety seeking.** As expected, results from a one-way ANOVA revealed a significant main effect of the motivation manipulation on variety seeking in alcoholic-beverage choices (\( F(2, 455) = 3.59, p = .029, \eta^2 = .02 \)). Participants in the parenting-motivation condition displayed less variety seeking (M = 2.34, SD = 1.36) than those in the active control condition (M = 2.67, SD = 1.26; \( t(455) = -2.17, p = .031, \) Cohen’s d = .25) and those in the inactive control condition (M = 2.71, SD = 1.30; \( t(455) = -2.46, p = .014, \) Cohen’s d = .28). Variety seeking between the two control conditions was not significantly different (\( t < 1, \) NS). The effects of parenting motivation remained robust (\( F(2, 450) = 3.44, p = .033, \eta_p^2 = .02 \)) after participants’ gender, age, working status, chronic parental status, and affective

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5 The results still held when the variety-seeking index was treated as an ordinal variable and non-parametric analyses were performed. For the sake of brevity, we reported the results using non-parametric analyses on the variety-seeking index across Studies 2–4 and Study 5A in Web Appendix D.

6 We examined the percentage of participants “taking-all-of-one-choice” or “taking-one-of-each-choice” across studies (except for Study 5B, in which variety seeking was measured by the binary decision to choose a new option; Web Appendix E). We observed that while the proportion of participants who picked one brand only was higher in the parenting condition than in the control conditions, participants were similarly, or even less, likely to choose all brands in the parenting motivation condition. Such analyses suggest that the decrease in variety seeking caused by parenting motivation was mainly driven by the large proportion of participants who just chose one brand.
Feelings of time crunch. Results from a one-way ANOVA revealed a significant main effect of parenting condition on feelings of time crunch (F(2, 455) = 27.30, p < .001, η² = .11), with participants in the parenting condition showing greater feelings of time crunch (M = 3.89, SD = 1.62) than those in the active control condition (M = 2.83, SD = 1.44; t(455) = 6.12, p < .001, Cohen’s d = .69) and the inactive control condition (M = 2.76, SD = 1.38; t(455) = 6.69, p < .001, Cohen’s d = .75). In addition, greater feelings of time crunch significantly predicted lower variety seeking (B = -.12, SE = .04; t(456) = -3.19, p = .002, ŋ² = .02). Results from PROCESS model 4 (5,000 bootstrapping samples; Hayes 2018) further indicated a significant indirect effect of motivation condition on variety seeking through feelings of time crunch (parenting vs. active control: indirect effect = .03, boot SE = .02, 95% CI = [.0044, .0728]; parenting vs. inactive control: indirect effect = .04, boot SE = .02, 95% CI = [.0063, .0803]).

Ancillary analysis. It was observed that the motivation manipulation did not significantly influence participants’ desire for novelty (M_{parenting} = 1.47, SD = .34 vs. M_{active} = 1.47, SD = .33 vs. M_{inactive} = 1.46, SD = .32; F < 1, NS). In addition, participants’ affective state did not significantly vary across conditions (M_{parenting} = 5.19, SD = 1.21 vs. M_{active} = 5.19, SD = 1.14 vs. M_{inactive} = 5.23, SD = 1.17; F < 1, NS).

Discussion

In Study 2, parenting motivation was temporarily induced by having participants view human infant faces and imagine being in a parental role. As predicted, parenting motivation led to less variety seeking as compared to the two control conditions. The inclusion of two control conditions provides strong evidence that the effect is driven by induced parenting.

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7 In the remaining studies, Studies 2-4 and 5A used a full-time, non-parent undergraduate student sample to tightly control working status and chronic parental status. Study 5B also controlled chronic parental status by using a parent sample. Gender, age, and affect were still measured and statistically controlled for.

8 The results of affective state in Studies 3–5 are summarized in Web Appendix F.
motivation rather than by certain confounding factors, such as the length or mere presence of manipulation materials. The different results between parenting-motivation and active control conditions helped to rule out the possibility that the observed effect occurs in any interpersonal context (e.g., friendship orientation). In addition, the mediational role of feelings of time crunch offers direct evidence for our proposed mechanism (H2). Affect and desire for novelty were ruled out as alternative explanations for the effect of parenting motivation on variety seeking in this study. It should be noted that prior research suggests that need for stimulation may also lead to variety seeking (Menon and Kahn 1995; Raju 1980). To evaluate this account based on need for stimulation, a posttest was conducted among a separate group of participants (N = 154). It shows that perceived stimulation did not differ between the parenting motivation and active-control conditions and thus is less likely to account for the effect on variety seeking (Web Appendix G).

Research finds that consumers tend to seek more variety in a public context for impression-management reasons (Ratner and Kahn 2002). Although not directly related to our current research on parenting motivation, the relationship of the finding in Study 2 to this prior research is worth considering. One may wonder why we did not observe more variety seeking among participants in the friendship-orientation condition than in the inactive control condition, as friendship can be considered a public, social relationship. We believe the answer to this question lies in a key difference between the two study settings, namely the extent to which participants perceived that their choices were under public scrutiny. In Ratner and Kahn’s study (2002), the impression-management motive was particularly salient because participants clearly knew that their choices would be revealed to others. In this study, however, participants made their choices in private, with no one to impress at the time of choice. Therefore, we did not observe an increase in variety seeking in the friendship-orientation condition.
STUDY 3: THE MEDIATING ROLE OF FEELINGS OF TIME CRUNCH

Study 3 is intended to provide additional evidence for the underlying mechanism of feelings of time crunch. According to our theorizing, parenting motivation elicits feelings of time crunch due to the significant amount of time investment required by parenting activities. If this is true, when consumers are led to believe that abundant parenting support from others can help reduce the time they spend handling parenting-associated obligations, they may feel less pressed for time, and the effect of parenting motivation on variety seeking should be weakened (H3). This study tests this prediction by manipulating the availability of parenting support. In addition, while Study 2 used an established scale to measure feelings of time crunch, Study 3 aims to replicate the mediational role of feelings of time crunch with a less obtrusive open-ended thought-listing approach to rule out possible demand effects associated with scale measurement.

Furthermore, given prior research suggesting that parents are more likely to engage in saving behavior (Canova, Rattazzi, and Webley 2005; Lee, Hanna, and Siregar 1997), one may wonder whether the reduced variety seeking results from money-saving motives. Study 3 examines this alternative explanation. The study also uses a real behavioral measure of variety seeking. Finally, as no difference was found between the active- and inactive-control conditions in Study 2, we use only an inactive-control condition in this study.

Method

Participants and design. Four hundred and seventy full-time undergraduates from a large Asian university, none of whom were parents, took part in this study for a nominal payment ($M_{age} = 21.59, 122$ males; gender split did not vary across different experimental
conditions, $\chi^2 < 1$, NS). Participants were randomly assigned to one of three conditions (parenting: parenting vs. parenting-with-support vs. control).

Procedure. Participants in the parenting and the parenting-with-support conditions completed an imagination task similar to the one in Study 2 to manipulate parenting motivation, except that they were presented with a set of 12 Asian infant baby faces. Participants in the parenting-with-support condition were further told that there were capable helpers (e.g., nannies, their parents, their parents-in-law) who could help take care of the baby in various time-consuming tasks; and participants were instructed to imagine a typical day as a parent for this baby but with abundant aid from other helper(s). Participants in the control condition skipped the imagination task. A pretest conducted among a separate group of participants ($N = 149$) indicated that the manipulation conditions did not influence affective state (see Web Appendix H).

Next, participants were told that as a token of appreciation for taking part in the study, they could take away some ballpoint pens as gifts; there were four brands of ballpoint pens available (i.e., Jim Knock, Uni Loknock, SARASA, and Juice). Participants were further instructed to choose three ballpoint pens in any combination of brands they liked and to complete a thought-listing task in which they were asked to use several sentences to elaborate on how they made their choices. The experimenter recorded the number of brands chosen as an index of variety-seeking behavior (with one representing the least variety chosen and three representing the most variety chosen). Finally, participants were asked to indicate their affective state with the same measure used in Study 2 ($\alpha = .88$). At the end of the study, participants received the ballpoint pens they had chosen.

Results

Variety seeking. A one-way ANOVA revealed a significant main effect of the parenting manipulation on variety seeking of ballpoint pens ($F(2, 467) = 5.05, p = .007, \eta^2$
Participants in the parenting condition chose less variety (M = 1.98, SD = .81) than did those in the parenting-with-support condition (M = 2.25, SD = .75; t(467) = -2.97, \(p = .003\), Cohen’s d = .35) and the control condition (M = 2.20, SD = .79; t(467) = -2.49, \(p = .013\), Cohen’s d = .27). No difference was found between the parenting-with-support condition and the control condition (t < 1, NS). The effects of parenting motivation remained robust (F(2, 464) = 4.93, \(p = .008\), \(\eta^2_p = .02\)) after participants’ gender, age, and affective state were added into the model as covariates.

**Thought-listing.** Two independent raters coded participants’ listed thoughts. The coders reached 94% agreement and resolved any divergent codes through discussion. Specifically, each participant’s listed thoughts were coded as 1 if they were related to time crunch (e.g., “To save time, I just pick the brands that I used before”) and as 0 otherwise. Results from a logistic regression revealed that the occurrence of thoughts related to time crunch differed significantly across conditions (\(\chi^2(2) = 13.57, p = .001\)), with a greater percentage of participants in the parenting condition reporting time crunch as they made their product choices (20.53%) than those in the parenting-with-support condition (10.14%; B = -.83, SE = .34; \(\chi^2(1) = 5.99, p = .014\), OR = .44) and the control condition (7.02%; B = -1.23, SE = .36; \(\chi^2(1) = 11.63, p = .001\), OR = .29). In addition, thoughts related to time crunch predicted variety seeking (B = -.46, SE = .11; t(468) = -4.22, \(p < .001\), \(f^2 = .04\)), with the presence of time-crunch thoughts associated with lower variety seeking. Given that the proposed mediator, time-crunch thoughts, was coded as a binary variable, the PROCESS Macro could not be used to test mediation; thus, we used the Sobel test (Baron and Kenny 1986) to investigate its mediational role. Results indicated a significant indirect effect of parenting condition on variety seeking through time-crunch-related thoughts (parenting vs. active control: \(p = .044\); parenting vs. inactive control: \(p = .010\)).
We also coded each participant’s listed thoughts related to money saving (e.g., “SARASA’s pens are quite expensive; choosing them as gifts could help me save more money on stationery”; coded as 1 if the listed thought mentioned saving money and as 0 otherwise). Results from a logistic regression revealed that money-saving-related thoughts did not differ significantly across conditions ($\chi^2(2) = 3.09, p > .20$).

**Discussion**

Study 3 provided additional support for our conceptualization with a real behavioral measure of variety seeking. Replicating previous studies, the results show that activating parenting motivation decreases variety seeking in the real choice of ballpoint pens. The listed thoughts pertaining to time crunch reveal mediation and offer additional evidence for our proposed mechanism (H2). Consistent with H3, we further demonstrated that when parenting is perceived as less time-consuming due to abundant parenting support, parenting motivation does not lead to a greater sense of time crunch and subsequently less variety seeking. Money saving was also ruled out as a potential alternative explanation for the effect of parenting motivation on variety seeking.

**STUDY 4: MODERATION BY TIME AVAILABILITY**

Study 4 seeks to provide further evidence that feelings of time crunch underlie the effect of parenting motivation on variety-seeking behavior. Our conceptualization predicts that parenting motivation will lead to less variety seeking due to feelings of time crunch, as a large amount of time is required by the myriad of parenting chores. If this is the case, then the effect should be mitigated when consumers are led to feel that they have abundant time for their shopping trips (H4). In addition, to further enhance external validity, in Study 4 we activate parenting motivation with materials that are common in mass media and the
marketplace. Specifically, parenting motivation is activated by presenting participants with a video clip featuring various parenting activities (e.g., feeding, bathing).

**Method**

*Participants and design.* For a nominal payment, 607 full-time undergraduates in a large Asian university participated in this study, none of whom were parents ($M_{\text{age}} = 21.07$, 171 males; gender split did not vary across different experimental conditions, $\chi^2(2) < 2.38$, $p_s > .30$). They were randomly assigned to conditions of a $2$ (motivation: parenting vs. control) $\times$ $2$ (time availability: baseline vs. time-available) between-subjects design.

*Procedure.* Participants were instructed to watch a short video clip ostensibly to be used in public communications. The video presented in the parenting-motivation conditions featured various parenting activities, including feeding, bathing, and educating kids. The video presented in the control conditions featured a city landscape. A pretest among a separate group of participants ($N = 108$) indicated that the two versions of videos did not influence affective state (see Web Appendix I). Next, under the cover story of an in-store poster-evaluation task, participants were presented with a series of posters designed for supermarkets. Participants in the time-available conditions were shown in-store posters depicting supermarket scenes with the headlines inducing a perception of time availability (e.g., “you can always find enough time to shop with us,” “time is always available for your every choice”); in contrast, in the baseline conditions, participants were shown a series of in-store posters containing the same visuals but with generic headlines (e.g., “you are welcome to come to visit us,” “we are here for your every choice”; see Web Appendix J). A pretest among a separate group of participants ($N = 96$) confirmed that the time-available in-store posters elicited less feelings of time crunch than those in the baseline condition ($F(1, 94) = 6.14, p = .015$) and that the two sets of posters did not differ in terms of perceived design.
quality \( F(1, 94) = 2.12, p > .10 \) or affective state induced \( (F < 1, \text{NS}; \text{see Web Appendix K for details}) \).

All participants were next asked to complete a hand-soap choice task that served to assess their variety-seeking behavior. They were instructed to imagine that they could select one brand of hand soap for each of four consecutive months from four international brands: Dove, Dettol, Lux, and Nivea. Participants were told they could select any combination of brands across the four months. The number of different brands chosen by each participant served as an index for variety seeking, ranging from 1 (no variety) to 4 (maximum variety). Finally, participants indicated their affective state with the same scale used in the previous studies \( (\alpha = .86) \).

**Results**

A two-way ANOVA revealed a significant interaction effect of motivation and time availability on variety seeking \( F(1, 603) = 5.05, p = .025, \eta^2_p = .01 \). When the participants were exposed to the in-store posters that did not induce thoughts about time availability, those in the parenting-motivation condition exhibited less variety in their hand-soap choices \((M = 2.37, \text{SD} = 1.29)\) than did those in the control conditions \((M = 2.75, \text{SD} = 1.30; t(603) = -2.70, p = .007, \text{Cohen’s d} = .29)\); however, the effect disappeared after they were exposed to the in-store posters with time-available headlines \((M_{\text{parenting}} = 2.95, \text{SD} = 1.19 \text{ vs. } M_{\text{control}} = 2.87, \text{SD} = 1.22; t < 1, \text{NS}; \text{see Figure 1})\). The effects of parenting motivation remained robust after participants’ gender, age, and affect were added into the model as covariates (interaction effect: \(F(1, 600) = 3.93, p = .048, \eta^2_p = .01\); main effect in the baseline condition: \(t(600) = -2.63, p = .009, \text{Cohen’s d} = .29\)).

**FIGURE 1 STUDY 4: VARIETY SEEKING OF HAND SOAP AS A FUNCTION OF MOTIVATION AND TIME AVAILABILITY**
Discussion

Study 4 demonstrated that feelings of time crunch play a critical role in the observed effect of parenting motivation on consumer variety seeking. Consistent with H4, the effect of parenting motivation on decreased variety seeking was attenuated when consumers were led to feel that they had enough time for their shopping trips and thus were relieved from the situationally activated feelings of time crunch. In addition, the effect of parenting motivation on variety seeking was evident when parenting motivation was triggered in a public communication context—that is, by exposure to videos featuring parenting activities. Given that video commercials are often shown in both entity and online stores, marketers can consider influencing consumers’ variety-seeking behavior with in-store videos at the time they make product choices.

STUDY 5: MODERATION BY BRAND LOYALTY

Study 5 aims to investigate brand loyalty as another moderator of the proposed effect of parenting motivation on variety seeking. Brand loyalty is of paramount importance in brand management and has important implications for marketing managers regarding consumers’ variety-seeking behavior. We predicted that feelings of time crunch induced by parenting motivation decrease variety seeking. Consumers who are making a decision under time crunch tend to engage in less exploratory behavior and consequently are more likely to
simply pick the most salient option to which they are loyal (Jacoby and Chestnut 1978; Jacoby and Kyner 1973). Thus, the effect of parenting motivation on variety seeking should be mitigated among those who do not have much loyalty to any brands in the product category and consequently cannot save time making choices by picking a brand to which they are loyal (H5).

Brand loyalty may be captured in various ways, such as self-brand connection and brand attachment (Batra, Ahuvia, and Bagozzi 2012; Escalas and Bettman 2005). To investigate the role of brand loyalty, we adopt different proxies of brand loyalty in Studies 5A and 5B. Specifically, brand loyalty is captured in Study 5A by self-brand connection (i.e., the extent by which individuals have incorporated brands into their self-concept; Escalas and Bettman 2005), and in Study 5B by brand attachment (i.e., consumers’ emotional passion, attachment, and commitment to a brand that arise from a long-term relationship with the brand; Batra, Ahuvia, and Bagozzi 2012; Carroll and Ahuvia 2006). Finally, we demonstrate that the effect of activating parenting motivation can be generalized to both non-parents (Study 5A) and parents (Study 5B).

**Study 5A**

*Method.* We recruited 596 undergraduates in a large Asian university, none of whom were parents (M<sub>age</sub> = 21.48, 193 males; gender split did not vary across the two conditions, \( \chi^2(1) = 1.96, p > .10 \), to participate in this study for a nominal payment. The study employed a mixed design, with parenting motivation (motivation: parenting vs. control) manipulated between subjects and self-brand connection as a proxy for brand loyalty measured individually.

To manipulate parenting motivation, participants in the parenting condition completed the same imagination task as in Study 3, and those in the control condition skipped the imagination task. Next, all participants were asked to imagine that they could select one
brand of shampoo for each of four consecutive months from four brands: Vidal Sassoon, Aussie, Alberto Balsam, and GUHL. While all four brands are from well-known international FMCG companies (i.e., Vidal Sassoon and Aussie from P&G, Alberto Balsam from Unilever, and GUHL from KAO), only Vidal Sassoon was available to local consumers; the other three were not launched in the local market. A pretest conducted among a separate group of participants from the same pool (N = 67) suggests that participants’ self-brand connection towards Vidal Sassoon, the in-market brand, had a moderate value with considerable variation across individuals, while their self-brand connections toward the other three brands not available in the local market were unanimously extremely low (Web Appendix L). Such a setting of brand options allowed us to investigate how participants’ self-brand connection towards the in-market brand influenced the effect of parenting motivation on consumers’ tendency to explore unfamiliar non-market brands and seek variety instead of sticking with the in-market brand. The number of different brands chosen by each participant served as an index for variety seeking, ranging from 1 (no variety) to 4 (maximum variety).

Participants were then asked to indicate their perceived connection with the focal in-market brand, Vidal Sassoon, using the Inclusion of Other in the Self (IOS) scale (Aron, Aron, and Smollan 1992; Donovan and Lutz 2016). Specifically, participants were shown seven Venn diagrams with various degrees of overlap between Vidal Sassoon and the self, and they indicated which image best represented their connection with the brand (1 = “no or negative relationship with Vidal Sassoon,” and 7 = “having close relationship with Vidal Sassoon”). Finally, participants indicated their affective state, as in the previous studies (α = .84).

Results. While a higher score on the IOS scale indicates higher self-brand connection with the in-market brand Vidal Sassoon (M = 3.15, SD = 1.72), the measured self-brand connection did not vary across the motivation conditions (F < 1, NS). An ANOVA showed
that parenting motivation led to less variety seeking (M = 2.49, SD = 1.33) than in the baseline condition (M = 2.82, SD = 1.29; F(1, 594) = 9.51, p = .002, \( \eta^2 = .02 \)). To test the predicted moderation, we regressed variety seeking in the choice of shampoo brands on the motivation-condition dummy (0 = control, 1 = parenting), mean-centered self-brand connection, and the interaction between them. The results showed that parenting motivation (B = -.30, SE = .10; t(592) = -2.93, p = .004, \( f^2 = .02 \)) and self-brand connection had significant effects on variety seeking (B = -.12, SE = .04; t(592) = -2.99, p = .003, \( f^2 = .07 \)), which were further qualified by their interaction (B = -.17, SE = .06; t(592) = -2.82, p = .005, \( f^2 = .01 \)). As shown in Figure 2, parenting motivation resulted in significantly less variety seeking than control only when consumers’ self-brand connection to the in-market brand, Vidal Sassoon, was not low (i.e., higher than 2.62; 57.38% of the participants). There was no significant difference in variety seeking when self-brand connection was lower than 2.62. These results are consistent with our prediction that the variety-seeking behavior of those with limited self-brand connection with the in-market brand is not influenced by parenting motivation. The effects remained robust after participants’ gender, age, and affective state were controlled (interaction effect: t(589) = -2.70, p = .007, \( f^2 = .01 \)).

FIGURE 2

STUDY 5A: VARIETY SEEKING OF SHAMPOO AS A FUNCTION OF MOTIVATION AND SELF-BRAND CONNECTION (RAW SCORE)
Method. We recruited 863 parents ($M_{\text{age}} = 31.57$, 349 males; gender split did not vary across two between-subjects conditions, $\chi^2(1) < 1$, NS) from the online crowdsourcing platform Credamo (Gai and Puntoni 2021; Gong et al. 2020) to participate in the study for a nominal payment. This study manipulated parenting motivation (motivation: parenting vs. control) between subjects and measured brand attachment as a proxy for brand loyalty.

Participants in the parenting condition were asked to recall and describe a typical day when they take care of children. In the control condition, participants were instructed to recall and describe a normal day in their daily lives. Then participants were asked to imagine that they were shopping in a supermarket and planning to purchase a bottle of fabric softener. The participants were presented with a product from ATTACK—a brand from KAO company available in the local market. Participants were instructed to imagine that this is the only brand they found in the supermarket and put it into their shopping carts. Next, they were presented with the other fabric softener brand (i.e., New Beads, a brand from the same company unavailable in the local market), and asked to imagine they found this brand on the way to the cashier. A pretest conducted among a separate group of participants from the same pool ($N = 80$) showed that the brand attachment with ATTACK in the local market is medium with considerable variance ($M = 4.08$, $SD = 1.83$), whereas New Beads is unanimously unfamiliar to local consumers ($M = 1.26$, $SD = .33$; Web Appendix M). As in Study 5A, such a setting of brand alternatives allows us to investigate how different levels of brand attachment as a proxy for brand loyalty toward the default brand, ATTACK, influence the effect of parenting motivation on consumers’ variety seeking, which was captured by the tendency to switch to the other brand instead of sticking to the default option.

After participants indicated their brand choice (i.e., $0 =$ stay with the originally taken brand, $1 =$ switch to a new brand), they were asked to indicate to what extent they agreed with three statements that measured their brand attachment towards the default brand,
ATTACK (i.e., “I feel a bond between me and this brand of fabric softener,” “this brand of fabric softener feels like a friend to me,” “I am emotionally connected to this brand of fabric softener”; 1 = “strongly disagree,” and 7 = “strongly agree”; α = .91; Batra, Ahuvia, and Bagozzi 2012). At the end of the study, all participants reported their affective states, as in previous studies (α = .89).

Results. Brand attachment (M = 4.59, SD = 1.38) did not vary across different parental motivation conditions (F(1, 861) = 2.44, p > .10). A logistic regression showed that participants in the parenting-motivation condition displayed less variety seeking than did those in the control condition (B = .55, SE = .14; χ²(1) = 14.73, p < .001, OR = 1.73). To test the predicted moderation, we regressed variety seeking in the choice of fabric softener brand on motivation-condition dummy (0 = control, 1 = parenting), mean-centered brand attachment, and the interaction between them. The results showed that parenting motivation (B = .58, SE = .15; χ²(1) = 14.30, p < .001, OR = 1.79) and brand attachment had significant effects on variety seeking (B = -.69, SE = .09; χ²(1) = 59.74, p < .001, OR = .50), which were further qualified by their interaction (B = .28, SE = .12; χ²(1) = 5.80, p = .016, OR = 1.33). As shown in Figure 3, parenting motivation significantly decreased variety seeking only when consumers’ brand attachment toward the default brand was not low (i.e., higher than 3.72; 73.58% of the participants). There was no significant difference in variety seeking when brand attachment was lower than 3.72. These results are consistent with our prediction that the variety seeking of those with limited brand attachment is not influenced by parenting motivation. The effects remained robust after participants’ gender, age, and affective state were added into the model as covariates (interaction effect: χ²(1) = 6.03, p = .014, OR = 1.34).

FIGURE 3 STUDY 5B: VARIETY SEEKING OF FABRIC SOFTENER AS A FUNCTION OF MOTIVATION AND BRAND ATTACHMENT (RAW SCORE)
Studies 5A and 5B tested the moderating effect of brand loyalty, which was proxied by self-brand connection (Study 5A) and brand attachment (Study 5B). Both Studies 5A and 5B show that parenting motivation decreases variety seeking when consumers have adequate brand loyalty. However, the effect diminishes when consumers’ brand loyalty toward the focal brand is limited (H5). In this situation, consumers do not have any top-of-mind preferred product option that they can simply choose under time-crunched decision making. In addition, the effect on variety seeking was evident when parenting motivation was triggered among a non-parent sample (Study 5A) or parent sample (Study 5B). It should be noted that there is a potential confound in the variety-seeking measure of Study 5B, such that the process of switching to the other brand described in the scenario (i.e., taking the new brand on the way to the cashier and putting the previously selected fabric softener brand back to the shelf) might take longer than sticking with the default brand. Despite the fact that the variety-seeking measure in Study 5B was open to this alternative interpretation, the convergent results from Studies 5A and 5B suggest that marketers can influence consumers’ variety seeking by switching parenting motivation on and off among different groups of target consumers. Nevertheless, a posttest (N = 101) was conducted to evaluate such a possibility, and the results revealed that consumers did not seem to perceive any significant time difference between the act of switching to a new brand and that of sticking with the
default option (see Web Appendix N). Thus, the effect on variety seeking in Study 5B is unlikely to be driven by perceptions of additional time being needed to switch brands.

**GENERAL DISCUSSION**

Parents are a sizable market segment, and marketing materials that induce thoughts related to parenting are commonplace. Therefore, it is important to understand how parenting motivation affects consumer behavior. This research explored the impact of parenting motivation on a pervasive decision-making tendency—namely, variety seeking—across various consumption domains. With the transition to parenthood marking a new chapter of life, new parents need to remain open to the associated challenges, so it is likely that they become more open-minded (Bornstein, Hahn, and Haynes 2011), which may spur greater variety seeking. Our interviews of managers in our pilot study also suggests that they intuit that parenting might lead consumers to seek more variety. However, the present investigation, through consumer panel data and experiments, shows the opposite: that parenting motivation decreases variety-seeking behavior. Study 1 used actual, longitudinal consumption data from a NielsenIQ panel dataset to demonstrate that consumers choose less variety after becoming parents. Study 2 showed that inducing parenting thoughts is sufficient to decrease variety-seeking behavior, independent of one’s own actual parental status. This effect was found to be driven by feelings of time crunch (Studies 2 and 3). Thus, this effect of parenting motivation on variety seeking was mitigated when people thought they could depend on ample support from other sources in the parenting process, which weakened feelings of time crunch (Study 3); when they were led to perceive that they had ample time for shopping (Study 4); or when they did not have much brand loyalty toward any of the product options and thus could not save time by picking their top-of-mind option (Studies 5A
and 5B). The robustness of this effect is supported by different operationalizations of parenting motivation (i.e., actual parental role, exposure to stimuli that evoke thoughts about parenting) and a combination of hypothetical and real behavioral measures of variety seeking (i.e., NielsenIQ panel data, incentive-compatible and hypothetical choices in lab and online experiments).

Several alternative explanations were assessed. First, thoughts about parenting might be so novel or stimulating that they reduce consumers’ need to seek novelty or stimulation in product choices (McAlister 1982; Raju 1980). As a result, consumers with active parenting motivation might seek less variety for this reason. These explanations were rendered less viable, as desire for novelty could not mediate the effect of parenting motivation on variety seeking, and the manipulation of parenting motivation did not affect perceived stimulation between the parenting and active-control conditions (Study 2). Second, because consumers’ tendency to choose variety can be influenced by their affective states (Kahn and Isen 1993; Roehm and Roehm 2004), parenting motivation may affect variety seeking via consumers’ affect. However, our finding that the effect of parenting motivation still holds after we control for affect contradicts this alternative account. Third, using thoughts listed by participants, we ruled out money saving as an alternative explanation for the effect (Study 3). Finally, parenting motivation may induce risk aversion (Eibach and Mock 2011) and consequently lead consumers to avoid risk by relying on familiar and trusted options rather than exploring alternatives (Kahn and Meyer 1989). This account based on risk attitude is less likely to explain why the effect of parenting motivation on variety-seeking behavior was weakened when consumers were led to believe that they had ample time for shopping (Study 4), since the perception of time available is unexpected to affect risk attitudes. However, future research is needed to formally evaluate this alternative account by directly measuring consumers’ risk attitudes in their choices.
This research contributes to the literature on parenting motivation in several ways. First, it uncovers a pervasive decision-making tendency that is affected by parenting motivation. Existing research on the impacts of parenting motivation on consumer behavior is scant, despite its indispensable role in human reproduction. An exception is the finding that parenting motivation prompts males to become more future-oriented and females more present-oriented when making intertemporal choices (Li, Haws, and Griskevicius 2019). The current research goes beyond the extant literature by showing that parenting motivation can also influence decision making in contexts that do not involve intertemporal decisions (i.e., variety seeking) by inducing feelings of time crunch. This effect was robust across genders. The finding generates opportunities for future research to explore other effects of parenting motivation on consumer decision making via feelings of time crunch. Second, the current research identifies feelings of time crunch as a mechanism for how parenting motivation may affect consumer behavior. Previous research focuses on how the social role of parent influences people’s feelings of time crunch due to parenting activities (Bradbury 2008; Reeves and Szafran 1996; Zuzanek 1998). The current research expands the boundary of the association between parental role and time crunch by showing that the feelings of time crunch triggered by parenting motivation generalize to product choices unrelated to parenting activities. Third, the current research yields rich insights into the parenting process. For example, Study 3 demonstrated how the availability of external social supports during parenting might help reduce feelings of time crunch and thus weaken the effect of parenting motivation on variety seeking. Study 4 further showed that perceived time availability can also lessen feelings of time crunch and thereby reduce the observed effect on variety seeking.

The current research also adds to the literature on variety-seeking behavior. Variety seeking has been found to be influenced by a number of factors, including decision context (Levav and Zhu 2009; Ratner and Kahn 2002), cognitive activation of variety-related
concepts (Maimaran and Wheeler 2008; Shen and Wyer 2010), an inherent need for
stimulation (Steenkamp and Baumgartner 1992), and variables related to consumers’
circadian rhythms (Gullo et al. 2019; Huang et al. 2019; Roehm and Roehm 2004). The
present research demonstrates that consumers’ specific social roles can also affect variety
seeking. Becoming a parent, or just the thought of it, can make consumers less likely to
diversify their choices.

This work highlights several directions for future research. For example, feelings of
time crunch induced by parenting motivation may lead consumers to focus more on the
peripheral route when processing persuasion messages (Petty and Cacioppo 2012), which
may make them more likely to rely on country of origin when making product evaluations
(Gürhan-Canli and Maheswaran 2000) and on pictorial rather than textual product
information (Pieters and Warlop 1999). These possibilities may be worth testing. Another
intriguing question is when the parenting motivation becomes active for actual parents. The
results from Studies 2 and 5B suggest that parents’ variety seeking does not decrease when
parenting motivation is situationally overridden by other motives or thoughts (e.g., social
motive in Study 2 and thoughts about mundane activities in Study 5B). Future research can
further explore when parenting motivation might be most salient and when it can be
suppressed. Moreover, future research can investigate whether the effect of parenting
motivation on variety seeking is affected by the age of children to be parented. It is possible
that parenting older children requires less time-consuming activities, weakening the observed
effect in this research. Future research can also examine whether variety-seeking behavior is
influenced by transitions to other social roles or the mere thought of them, such as becoming
a husband or wife, or being an immigrant in another country. Finally, it would be interesting
to investigate the downstream consequences of reduced variety seeking by parents in real life.
One may wonder whether reducing variety in product choices helps at least partially fulfill
parents’ need to save time, thereby relieving feelings of time crunch associated with parenting activities to a degree that may improve the well-being of parents.

This research focuses on consumers’ variety seeking among different brands or products within a specific product category. However, variety seeking may be conceptualized on a more global level, such as the number of different product categories to be purchased (Dhar, Hoch, and Kumar 2001; Sun, Rajiv, and Chu 2016). Becoming a parent may mean that a consumer needs to make purchases in new product categories they have never considered before (e.g., diapers, baby formula). It might be interesting to explore whether parenting motivation, in addition to restricting the variety sought in a given product category, may increase the variety of product categories considered or included for purchase. Relatedly, as parenting is a complex phenomenon, its impact on variety seeking may be multiply determined. To this extent, while this research shows that feelings of time crunch contribute to the effect of parenting motivation on decreased variety seeking, future research may examine whether consumers’ desire for variety is satisfied by the choice of more varied product categories and consequently they reduce their within-category variety seeking when parenting motivation is activated.

This research also contributes to a vast stream of research on brand loyalty by examining its role in the effect of parenting motivation. While loyalty for one brand is associated with less variety seeking in brand choices by encouraging consumers to engage in habitual or repeated purchases toward the loyal brand (Jacoby and Chestnut 1978), our findings suggest that such a tendency can be strengthened by activating parenting motivation among consumers. That is, consumers with parenting motivation are more likely to stick with the loyal brand due to a perception of time crunch triggered by parenting motivation. In this sense, while prior research has identified various factors influencing the role of consumers’ brand loyalty in habitual purchase (e.g., temporarily out of stock of the loyal brand at the
visited store; Day, Shocker, and Srivastava 1979), the current research suggests parenting motivation as another situational factor.

This research offers novel insights for marketing practitioners. As revealed in our pretest surveying managers in FMCG companies, parents are unanimously regarded as an important consumer group, and variety seeking is a significant factor to consider when designing marketing strategy to them. Information about parental status is also readily available to managers through public records (e.g., births, family members) and purchase patterns (e.g., purchase of baby diapers). While marketing managers have already strategically used parental-status information recorded in consumer “big data” to promote certain product categories (e.g., Target mails coupons for baby clothes to pregnant women or new mothers; Duhigg 2013), companies could do much more with such information by considering the impact of parental status on the general variety-seeking tendency. For example, in the context of e-commerce, after a company detects a change in parental status, focusing on improving a few appealing options might be a better strategy to match the reduced variety-seeking tendency than recommending many different product options.

More importantly, our research shows that the effect on decreased variety seeking also occurs for non-parents who are cued to think about parenting. Exposure to advertisements or commercials featuring baby faces (Studies 3 and 5A) and parenting activities (Study 4) is sufficient to induce parenting motivation among non-parents. This creates an opportunity for marketers to manage consumers’ variety seeking through the use of marketing materials (e.g., advertisements and commercials featuring baby faces or parenting activities) that may evoke parenting-related thoughts. When a company does not have an advantage in product variety as compared to its competitors, it may depict the use of its products by parents or use images of cute babies that induce thoughts about parenting in its advertisements or commercials. Similarly, the results from Studies 2 and 5B suggest that
marketers can also prevent a decrease in variety seeking among actual parents by activating a
different motivation to override parenting motivation (e.g., activating social motive in Study
2) or by making unrelated thoughts more salient (e.g., leading parents to think about non-
parenting, mundane activities in Study 5B).

Finally, our findings on the role of brand loyalty have important managerial
implications. For example, established brands, which tend to enjoy more brand loyalty among
consumers, can consider activating parenting motivation among their target consumers to
reduce their variety seeking and reinforce their stickiness to the brands; meanwhile, when
brands want to introduce a newly launched product to their parent consumers, they can use
marketing communications to prevent the effect of parenting motivation by making other
motives salient.
REFERENCES


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### WEB APPENDIX A

**ADDITIONAL ANALYSES FOR STUDY 1**

**TABLE W1**

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<td>Candy</td>
<td>245,603</td>
<td>138,618</td>
<td>56%</td>
</tr>
<tr>
<td>Carbonated Beverages</td>
<td>274,831</td>
<td>170,489</td>
<td>62%</td>
</tr>
<tr>
<td>Cereal</td>
<td>186,617</td>
<td>92,739</td>
<td>50%</td>
</tr>
<tr>
<td>Frozen Dinner</td>
<td>24,724</td>
<td>16,677</td>
<td>67%</td>
</tr>
<tr>
<td>Frozen Pizza</td>
<td>83,928</td>
<td>44,978</td>
<td>54%</td>
</tr>
<tr>
<td>Gum</td>
<td>39,905</td>
<td>14,114</td>
<td>35%</td>
</tr>
<tr>
<td>Ice Cream</td>
<td>133,862</td>
<td>57,593</td>
<td>43%</td>
</tr>
<tr>
<td>Ketchup</td>
<td>25,871</td>
<td>3,946</td>
<td>15%</td>
</tr>
<tr>
<td>Lotion</td>
<td>30,304</td>
<td>7,040</td>
<td>23%</td>
</tr>
<tr>
<td>Pet Food</td>
<td>134,927</td>
<td>74,663</td>
<td>55%</td>
</tr>
<tr>
<td>Shampoo</td>
<td>36,294</td>
<td>8,690</td>
<td>24%</td>
</tr>
<tr>
<td>Soft Drinks (Non-Carbonated)</td>
<td>129,071</td>
<td>64,047</td>
<td>50%</td>
</tr>
<tr>
<td>Table Syrups</td>
<td>22,342</td>
<td>2,961</td>
<td>13%</td>
</tr>
<tr>
<td>Yogurt</td>
<td>142,813</td>
<td>97,557</td>
<td>68%</td>
</tr>
</tbody>
</table>
TABLE W2

HOUSEHOLD DEMOGRAPHICS IN THE YEAR BEFORE BECOMING PARENT(S)

<table>
<thead>
<tr>
<th>Household Income</th>
<th>%</th>
<th>Education</th>
<th>%</th>
<th>Age</th>
<th>%</th>
<th>Employment</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under $5000</td>
<td>.93</td>
<td>No Male Head</td>
<td>15.52</td>
<td>No Male Head</td>
<td>15.52</td>
<td>Male Head</td>
<td></td>
</tr>
<tr>
<td>$5000-$7999</td>
<td>.34</td>
<td>Male Head</td>
<td>4.30</td>
<td>Under 25 Years</td>
<td>.78</td>
<td>Under 25 hours</td>
<td>.312</td>
</tr>
<tr>
<td>$8000-$9999</td>
<td>.63</td>
<td>Male Head</td>
<td>6.31</td>
<td>25-29 Years</td>
<td>8.83</td>
<td>30-34 hours</td>
<td>2.54</td>
</tr>
<tr>
<td>$10,000-$11,999</td>
<td>.98</td>
<td>Male Head</td>
<td>15.91</td>
<td>30-34 Years</td>
<td>17.13</td>
<td>35+ hours</td>
<td>66.47</td>
</tr>
<tr>
<td>$12,000-$14,999</td>
<td>1.37</td>
<td>Male Head</td>
<td>15.91</td>
<td>35-39 Years</td>
<td>14.06</td>
<td>Not Employed for Pay</td>
<td>12.35</td>
</tr>
<tr>
<td>$15,000-$19,999</td>
<td>2.49</td>
<td>Male Head</td>
<td>28.65</td>
<td>40-44 Years</td>
<td>10.00</td>
<td>Female Head</td>
<td>2.00</td>
</tr>
<tr>
<td>$20,000-$24,999</td>
<td>3.56</td>
<td>Female Head</td>
<td>28.65</td>
<td>45-49 Years</td>
<td>6.34</td>
<td>Female Head</td>
<td>10.30</td>
</tr>
<tr>
<td>$25,000-$29,999</td>
<td>3.81</td>
<td>No Female Head</td>
<td>2.00</td>
<td>50-54 Years</td>
<td>8.15</td>
<td>Female Head</td>
<td>5.08</td>
</tr>
<tr>
<td>$30,000-$34,999</td>
<td>5.37</td>
<td>Female Head</td>
<td>.29</td>
<td>55-64 Years</td>
<td>14.10</td>
<td>Female Head</td>
<td>57.00</td>
</tr>
<tr>
<td>$35,000-$39,999</td>
<td>5.03</td>
<td>Female Head</td>
<td>1.51</td>
<td>65+ Years</td>
<td>5.08</td>
<td>No Female Head</td>
<td>25.62</td>
</tr>
<tr>
<td>$40,000-$44,999</td>
<td>4.20</td>
<td>Female Head</td>
<td>16.64</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$45,000-$49,999</td>
<td>5.66</td>
<td>Female Head</td>
<td>25.57</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$50,000-$59,999</td>
<td>9.52</td>
<td>Female Head</td>
<td>36.60</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$60,000-$69,999</td>
<td>10.00</td>
<td>Female Head</td>
<td>17.37</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$70,000-$99,999</td>
<td>25.67</td>
<td>Female Head</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$100,000 +</td>
<td>20.46</td>
<td>Female Head</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TABLE W3
TEST OF PARALLEL PRE-PARENT TRENDS

<table>
<thead>
<tr>
<th></th>
<th>All Trips</th>
<th>Trips with Quantity &gt; 1</th>
<th>Trips with Quantity &gt; 2</th>
<th>Trips with Quantity &gt; 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1(Parent)</td>
<td>-.0050***</td>
<td>-.0081***</td>
<td>-.0101***</td>
<td>-.0114***</td>
</tr>
<tr>
<td></td>
<td>(.0017)</td>
<td>(.003)</td>
<td>(.0039)</td>
<td>(.0042)</td>
</tr>
<tr>
<td>1(1 Year Pre-Parent)</td>
<td>-.0008</td>
<td>-.0005</td>
<td>-.0022</td>
<td>-.0041</td>
</tr>
<tr>
<td></td>
<td>(.0015)</td>
<td>(.0026)</td>
<td>(.0034)</td>
<td>(.0037)</td>
</tr>
<tr>
<td>1(2 Years Pre-Parent)</td>
<td>-.0001</td>
<td>.0009</td>
<td>.0010</td>
<td>.0004</td>
</tr>
<tr>
<td></td>
<td>(.0015)</td>
<td>(.0026)</td>
<td>(.0033)</td>
<td>(.0036)</td>
</tr>
<tr>
<td>1(3 Years Pre-Parent)</td>
<td>.0016</td>
<td>.0039</td>
<td>.0053</td>
<td>.0040</td>
</tr>
<tr>
<td></td>
<td>(.0015)</td>
<td>(.0026)</td>
<td>(.0034)</td>
<td>(.0037)</td>
</tr>
</tbody>
</table>

Fixed Effects:
- Household-category
- Category-week
- Category Quantity
- Basket Quantity
- Day of Week
- Day of Month
- Demographics

R²
- .6823
- .5147
- .5476
- .5491

Nobs
- 1,511,092
- 791,792
- 440,790
- 302,531

Note: *, **, and *** represent 10%, 5%, and 1% significance level, respectively. S.E. are clustered at the household level. The baseline is more than three years pre-parent.

TABLE W4
ROBUSTNESS CHECKS: ALTERNATIVE DVs AND DEFINITION OF CATEGORY

<table>
<thead>
<tr>
<th></th>
<th># of Unique UPCs</th>
<th># of Brands Quantity</th>
<th>Whether Bought New UPC vs. Last Trip with Cat.</th>
<th>% of New UPCs vs. Last Trip with Cat.</th>
<th>Cat. Defined as Subclass</th>
</tr>
</thead>
<tbody>
<tr>
<td>1(Parent)</td>
<td>-.0441***</td>
<td>-.0063***</td>
<td>-.0049*</td>
<td>-.0052*</td>
<td>-.0067***</td>
</tr>
<tr>
<td></td>
<td>(.0125)</td>
<td>(.0018)</td>
<td>(.0026)</td>
<td>(.0029)</td>
<td>(.0022)</td>
</tr>
</tbody>
</table>

Fixed Effects:
- Household-category
- Category-week
- Category Quantity
- Basket Quantity
- Day of Week
- Day of Month
- Demographics

R²
- .5030
- .5446
- .2232
- .2447
- .5699

Nobs
- 791,792
- 791,792
- 791,792
- 791,792
- 778,795

Note: *, **, and *** represent 10%, 5%, and 1% significance level, respectively. S.E. are clustered at the household level. “Cat.” stands for category. All regressions are based on the sample with quantity greater than 1. For the last column, “Cat. Defined as Subclass,” category is defined at the product-module level in the Nielsen data, and the DV is the ratio of unique UPCs to quantity.
### TABLE W5
**ROBUSTNESS CHECKS: EXCLUSION OF ONE CATEGORY**

<table>
<thead>
<tr>
<th>Category Excluded</th>
<th>Estimate of 1(Parent)</th>
<th>R²</th>
<th>Nobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candy</td>
<td>-.0091*** (.0025)</td>
<td>.5540</td>
<td>653,188</td>
</tr>
<tr>
<td>Gum</td>
<td>-.0086*** (.0023)</td>
<td>.5152</td>
<td>777,928</td>
</tr>
<tr>
<td>Pet Food</td>
<td>-.0081*** (.0023)</td>
<td>.5064</td>
<td>717,238</td>
</tr>
<tr>
<td>Cereal</td>
<td>-.0075*** (.0024)</td>
<td>.5123</td>
<td>699,040</td>
</tr>
<tr>
<td>Ketchup</td>
<td>-.0085*** (.0023)</td>
<td>.5141</td>
<td>788,205</td>
</tr>
<tr>
<td>Table Syrups</td>
<td>-.0084*** (.0022)</td>
<td>.5143</td>
<td>789,238</td>
</tr>
<tr>
<td>Carbonated Beverages</td>
<td>-.0073*** (.0024)</td>
<td>.4996</td>
<td>621,298</td>
</tr>
<tr>
<td>Soft Drinks (Non-Carbonated)</td>
<td>-.0083*** (.0024)</td>
<td>.5110</td>
<td>727,816</td>
</tr>
<tr>
<td>Ice Cream</td>
<td>-.0091*** (.0023)</td>
<td>.5122</td>
<td>734,245</td>
</tr>
<tr>
<td>Frozen Pizza</td>
<td>-.0086*** (.0023)</td>
<td>.5180</td>
<td>746,910</td>
</tr>
<tr>
<td>Frozen Dinner</td>
<td>-.0087*** (.0023)</td>
<td>.5138</td>
<td>775,250</td>
</tr>
<tr>
<td>Yogurt</td>
<td>-.0095*** (.0023)</td>
<td>.5004</td>
<td>694,269</td>
</tr>
<tr>
<td>Shampoo</td>
<td>-.0084*** (.0023)</td>
<td>.5149</td>
<td>783,436</td>
</tr>
<tr>
<td>Lotion</td>
<td>-.0084*** (.0022)</td>
<td>.5140</td>
<td>785,122</td>
</tr>
</tbody>
</table>

Note: *, **, and *** represent 10%, 5%, and 1% significance level, respectively. S.E. are clustered at the household level. All regressions are based on the sample with quantity greater than 1. The DV is the ratio of unique UPCs to quantity. In each row, we exclude the corresponding category.
WEB APPENDIX B

PARENTING MOTIVATION AND ACTIVE CONTROL MANIPULATIONS USED IN STUDY 2

Parenting-motivation condition:

Instructions: This study is about relationship roles. Specifically, we are interested in how different types of social situations influence priorities and preferences. You will be asked to imagine being in a certain relationship. Then you will answer some questions about your preferences.

We would like you to imagine being the mother (father) of an infant. If you have never been a mom (dad), try to imagine what it would be like based on your experiences. Put yourself in the role of a mother (father) and take her (his) perspective when answering the questions in this study.

To help you with this perspective-taking task, look at the images below. Think about the baby that you think is the cutest, and looks most like you. Imagine that this is your baby and answer the questions that follow.

Which baby looks most like you?

Please a) indicate the number of the picture and then b) give your baby a name:
Imagine that this is your baby. Think about what it would be like to be this baby’s parent. Describe a typical day you may spend with this baby as a parent—for example, possible duties throughout the day, what you need to do, how you arrange your schedule and activities, what you think, and how you feel. Be as specific as possible.
**Active-control condition:**

This study is about relationship roles. Specifically, we are interested in how different types of social situations influence priorities and preferences. You will be asked to imagine being in a certain relationship. Then you will answer some questions about your preferences.

We would like you to imagine moving to a place and making friends. If you have never moved before, try to imagine what it would be like based on your experiences. Put yourself in the role of someone who is making a new friend, and take this perspective when answering the questions in this study.

To help you with this perspective-taking task, look at the images below. Think about the person that looks most like he/she could be a new friend for you. Imagine that you are thinking about becoming friends with this person and answer the questions that follow.

![Images of potential new friends]

Which person looks most like a potential new friend?

Please a) indicate the number of the picture and b) give this person a name:

Imagine being friends with this person. Think about what it would be like to be this person’s friend. Describe a typical day you may spend with this person as a friend—for example, possible duties throughout the day, what you do, how you arrange your schedule and activities, what you think, and how you feel. Be as specific as possible.
WEB APPENDIX C

PRETEST FOR MOTIVATION MANIPULATION IN STUDY 2

A total of 141 U.K. participants (M_\text{age} = 39.69, 66 males, 61 parents; the splits of gender and parental status did not vary across different experimental conditions, \( \chi^2 < 4.15, p > .30 \)) took part in this study. Participants were randomly assigned to one of three between-subjects conditions (motivation: parenting vs. active control vs. inactive control). Participants in the parenting-motivation condition viewed a set of 12 images of baby faces of different ethnicities. They were further instructed to select one baby that looked most like he/she could be their child and to elaborate on what it might be like to spend a typical day taking caring of the baby as his/her parent. A parallel imagination task was included in the active-control condition. However, instead of viewing baby faces and imagining being a parent to one of them, participants in the active-control condition were asked to imagine making friends with a person. They were presented with a set of 12 images of adult faces of different ethnicities with mixed genders (i.e., six men and six women) and were asked to choose one person that looked most like he/she could be their new friend. Participants then wrote about what it could be like to spend a typical day with this person after making friends with him/her. Participants in the inactive-control condition skipped the imagination task. Then all participants were asked to respond to an eight-item affect scale (e.g., “I feel good/bad (reverse-coded)/friendly/unfriendly (reverse-coded)/pleasant/angry (reverse-coded)/happy/sad (reverse-coded)”; 1 = “not at all” and 7 = “extremely”; Williams, Davies, and Chadury 2000).

The eight items of the affect scale were averaged together to form an index for affective state (\( \alpha = .70 \)), with higher score representing more positive affective state. Results from a one-
way ANOVA revealed that parenting motivation did not have a significant main effect on affective state ($F(2, 138) = 1.43, p > .20$). Participants’ affective states in the parenting-motivation condition did not differ from those in the active-control condition ($M_{\text{parenting}} = 5.24$, SD = .67 vs. $M_{\text{active}} = 5.27$, SD = .70; $t < 1$, NS) or in the inactive-control condition ($M_{\text{parenting}} = 5.24$, SD = .67 vs. $M_{\text{inactive}} = 5.03$, SD = .83; $t(138) = 1.33$, $p > .10$). No difference was found between the active-control condition and the inactive-control condition ($t(138) = 1.58$, $p > .10$).
## WEB APPENDIX D

**NON-PARAMETRIC RESULTS ON VARIETY SEEKING ACROSS STUDIES 2–4 AND 5A**

<table>
<thead>
<tr>
<th>Study</th>
<th>The main effect of motivation</th>
<th>non-parametric Kruskal-Wallis H test: $\chi^2(2) = 7.05, p = .030$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study 2</td>
<td>Parenting motivation vs. active control</td>
<td>non-parametric Wilcoxon test: $z = -2.21, p = .027$</td>
</tr>
<tr>
<td></td>
<td>Parenting motivation vs. inactive control</td>
<td>non-parametric Wilcoxon test: $z = -2.40, p = .017$</td>
</tr>
<tr>
<td>Study 3</td>
<td>The main effect of motivation</td>
<td>non-parametric Kruskal-Wallis H test: $\chi^2(2) = 9.55, p = .008$</td>
</tr>
<tr>
<td></td>
<td>Parenting motivation vs. parenting-with-support</td>
<td>non-parametric Wilcoxon test: $z = -2.90, p = .004$</td>
</tr>
<tr>
<td></td>
<td>Parenting motivation vs. control</td>
<td>non-parametric Wilcoxon test: $z = -2.42, p = .016$</td>
</tr>
<tr>
<td>Study 4</td>
<td>The interaction effect of motivation × time availability</td>
<td>non-parametric Generalized Linear Model: $\chi^2(1) = 5.04, p = .025$</td>
</tr>
<tr>
<td></td>
<td>Simple contrast in baseline condition</td>
<td>non-parametric Wilcoxon test: $z = -2.54, p = .011$</td>
</tr>
<tr>
<td></td>
<td>Simple contrast in time-available condition</td>
<td>non-parametric Wilcoxon test: $z = .57, p &gt; .50$</td>
</tr>
<tr>
<td>Study 5A</td>
<td>The interaction effect of motivation × brand loyalty</td>
<td>non-parametric Generalized Linear Model: $\chi^2(1) = 6.92, p = .009$</td>
</tr>
<tr>
<td></td>
<td>Simple contrast when brand loyalty is high (&gt; 2.62)</td>
<td>non-parametric Wilcoxon test: $z = -3.90, p &lt; .001$</td>
</tr>
<tr>
<td></td>
<td>Simple contrast when brand loyalty is low (≤ 2.62)</td>
<td>non-parametric Wilcoxon test: $z = .38, p &gt; .70$</td>
</tr>
</tbody>
</table>
WEB APPENDIX E

PERCENTAGES OF “TAKING-ALL-OF-ONE-CHOICE” VERSUS “TAKING-ONE-OF-EACH-CHOICE” ACROSS STUDIES 2-4 AND 5A

<table>
<thead>
<tr>
<th>Study</th>
<th>Parenting Motivation</th>
<th>% (taking-all-of-one-choice)</th>
<th>% (taking-one-of-each-choice)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study 2</td>
<td>Parenting Motivation</td>
<td>44.2%</td>
<td>36.1%</td>
</tr>
<tr>
<td></td>
<td>Active Control</td>
<td>26.4%</td>
<td>41.2%</td>
</tr>
<tr>
<td></td>
<td>Inactive Control</td>
<td>29.4%</td>
<td>43.6%</td>
</tr>
<tr>
<td>Study 3</td>
<td>Parenting Motivation</td>
<td>33.8%</td>
<td>31.8%</td>
</tr>
<tr>
<td></td>
<td>Parenting-with-Support</td>
<td>18.2%</td>
<td>43.2%</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>23.4%</td>
<td>43.3%</td>
</tr>
<tr>
<td>Study 4</td>
<td>Parenting Motivation</td>
<td>38.5%</td>
<td>32.1%</td>
</tr>
<tr>
<td>(Within the baseline condition)</td>
<td>Control</td>
<td>29.0%</td>
<td>45.8%</td>
</tr>
<tr>
<td>Study 5A</td>
<td>Parenting Motivation</td>
<td>37.4%</td>
<td>37.8%</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>26.7%</td>
<td>49.1%</td>
</tr>
</tbody>
</table>
WEB APPENDIX F

SUMMARY OF AFFECTIVE STATE IN STUDIES 3–5

Study 3:

Affective state did not differ across the three experimental conditions (M_{parenting} = 5.84, SD = 1.21 vs. M_{parenting-with-support} = 5.87, SD = 1.22 vs. M_{control} = 6.06, SD = 1.00; F(2, 467) = 1.75, p > .10).

Study 4:

Affective state did not vary across four experimental conditions (for interaction and main effects: F < 1, NS). Specifically, in baseline conditions: M_{parenting} = 5.07, SD = .87 vs. M_{control} = 5.12, SD = .88 (F < 1, NS); in time-available conditions: M_{parenting} = 5.08, SD = .89 vs. M_{control} = 5.07, SD = .98 (F < 1, NS).

Study 5A:

Affective state did not vary across the two motivation conditions (M_{parenting} = 5.10, SD = .93 vs. M_{control} = 5.16, SD = .90; F < 1, NS).

Study 5B:

Affective state did not vary across the two motivation conditions (M_{parenting} = 5.21, SD = .95 vs. M_{control} = 5.24, SD = .99; F < 1, NS).
WEB APPENDIX G

POSTTEST IN STUDY 2

A total of 154 U.K. participants (M_{age} = 34.19, 40 males, 68 parents; the splits of gender and parental status did not vary across different experimental conditions, \chi^2(2) < 2.23, ps > .30) took part in this study. Participants were randomly assigned to one of three between-subjects conditions (motivation: parenting vs. active control vs. inactive control). Participants in the parenting-motivation condition viewed a set of 12 images of baby faces of different ethnicities. They were further instructed to select one baby who looked most like he/she could be their child and to elaborate on what it might be like to spend a typical day taking caring of the baby as his/her parent. A parallel imagination task was included in the active-control condition. However, instead of viewing baby faces and imagining being a parent to one of them, participants in the active-control condition were asked to imagine making friends with a person. They were presented with a set of 12 images of adult faces of different ethnicities with mixed genders (i.e., six men and six women) and were asked to choose one person who looked most like he/she could be their new friend. Participants then wrote about what it could be like to spend a typical day with this person after making friends with him/her. Participants in the inactive-control condition skipped the imagination task. Then all participants were instructed to indicate to what extent they felt stimulated (1 = “not stimulated at all,” and 7 = “very stimulated”).

Results from a one-way ANOVA revealed that parenting motivation had a significant main effect on perceived level of stimulation (F(2, 151) = 3.25, p = .042). Participants’ perceived level of stimulation in the parenting-motivation and active-control conditions was higher than in the inactive-control condition (M_{parenting} = 5.57, SD = 1.60 vs. M_{inactive} = 4.93, SD = 1.49; t(151) = 2.16, p = .032; M_{active} = 5.56, SD = 1.36 vs. M_{inactive} = 4.93, SD = 1.49; t(151) = 2.20, p = .029);
however, no difference was found between the parenting and active-control conditions (t < 1, NS).

If the decreased variety seeking in the parenting-motivation condition (vs. inactive-control condition) was purely driven by need for stimulation, we should observe similar decrease in variety seeking in the active-control condition (vs. the inactive-control condition). However, the results on variety seeking in the main study were inconsistent with this conjecture, as variety seeking in the parenting-motivation condition was lower than in both the active-control and inactive-control conditions. We thus conclude that need for stimulation cannot fully account for the observed effect of parenting motivation on variety seeking.
WEB APPENDIX H
PRETEST FOR MOTIVATION MANIPULATION IN STUDY 3

A total of 149 participants (M\text{age} = 21.77, 41 males; the gender split did not vary across different experimental conditions; none of the participants were parents, \chi^2 < 1, NS) were randomly assigned to one of three between-subjects conditions (motivation: parenting vs. parenting-with-support vs. control). Participants in the parenting and the parenting-with-support conditions completed an imagination task similar to that used in Study 2 to manipulate parenting motivation, except that they were presented with a set of 12 Asian infant faces. Participants in the parenting-with-support condition were further told that there were capable helpers (e.g., nannies, their parents, their parents-in-law) who could help take care of the baby on various time-consuming tasks; participants were instructed to imagine a typical day as a parent of this baby but with abundant aid from other helper(s). Participants in the control condition skipped the imagination task. Then all participants were asked to respond to an eight-item affect scale (e.g., “I feel good/bad (reverse-coded)/friendly/unfriendly (reverse-coded)/pleasant/angry (reverse-coded)/happy/sad (reverse-coded)”; 1 = “not at all” and 7 = “extremely”; Williams, Davies, and Chadury 2000).

The eight items of the affect scale were averaged together to form an index for affective state (\alpha = .90). Participants’ affective states in the parental-motivation condition did not differ from those in the parenting-with-support condition (M_{parenting} = 4.89, SD = .48 vs. M_{support} = 4.84, SD = .54; t < 1, NS) or in the control condition (M_{parenting} = 4.89, SD = .48 vs. M_{control} = 4.90, SD = .43; t < 1, NS). No difference was found between the parenting-with-support condition and the control condition (t < 1, NS).
WEB APPENDIX I

PRETEST FOR MOTIVATION MANIPULATION IN STUDY 4

A total of 108 participants ($M_{age} = 41.66, 49$ males; the gender split did not vary across different experimental conditions, $\chi^2 = 3.76, p > .10$) were randomly assigned to one of two between-subjects conditions (motivation: parenting vs. control). Participants were instructed to watch a short video clip ostensibly to be used in public communications. The video presented in the parenting-motivation conditions featured various parenting activities, including feeding, bathing, and educating kids. The video presented in the control conditions featured a city landscape. Participants were then asked to respond to an eight-item affect scale (e.g., “I feel good/bad (reverse-coded)/friendly/unfriendly (reverse-coded)/pleasant/angry (reverse-coded)/happy/sad (reverse-coded)”; $1$ = “not at all,” and $7$ = “extremely”; Williams, Davies, and Chadury 2000).

The eight items of the affect scale were averaged to form an index for affective state ($\alpha = .92$). The participants in the parental-motivation condition did not differ from those in the control condition ($M_{parenting} = 5.91, SD = 1.16$ vs. $M_{control} = 6.00, SD = .96$; $F < 1$, NS).
WEB APPENDIX J

POSTERS FOR TIME-AVAILABILITY MANIPULATION IN STUDY 4

<table>
<thead>
<tr>
<th>Baseline Condition</th>
<th>Time-available Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Baseline poster" /></td>
<td><img src="image2" alt="Time-available poster" /></td>
</tr>
<tr>
<td>You are welcome to come to visit us.</td>
<td>You can always find enough time to stay with us.</td>
</tr>
<tr>
<td><img src="image3" alt="Baseline poster" /></td>
<td><img src="image4" alt="Time-available poster" /></td>
</tr>
<tr>
<td>You can choose what you want.</td>
<td>Time is always there for you to choose what you want.</td>
</tr>
<tr>
<td>Baseline Condition</td>
<td>Time-available Condition</td>
</tr>
<tr>
<td>--------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td><img src="image1" alt="Baseline Condition Image" /></td>
<td><img src="image2" alt="Time-available Condition Image" /></td>
</tr>
<tr>
<td>Products for your every shopping trip.</td>
<td>Leave <strong>plenty of time</strong> for your every shopping trip.</td>
</tr>
<tr>
<td>We are here for your every choice.</td>
<td><strong>Time is always available</strong> for your every choice.</td>
</tr>
</tbody>
</table>

*Journal of Marketing Research*
WEB APPENDIX K

PRETEST FOR TIME-AVAILABILITY MANIPULATION IN STUDY 4

Method

A total of 96 participants (M_{age} = 43.13, 77 males; the gender split did not vary across different experimental conditions, \chi^2 < 1, NS) took part in this study. Participants were randomly assigned to one of two between-subjects conditions (time availability: baseline vs. time-available).

Under the cover story of an in-store poster-evaluation task, participants were presented with a series of posters designed for supermarkets. Participants in the time-available conditions were shown in-store posters depicting a supermarket with the headlines inducing a perception of time availability (e.g., “you can always find enough time to stay with us,” “time is always available for your every choice”); in contrast, in the baseline conditions, participants were shown a series of in-store posters containing the same visuals but with generic headlines (e.g., “you are welcome to come to visit us,” “we are here for your every choice”; see Web Appendix J). The participants were asked to rate the visual design of the posters (i.e., “How would you rate the visual design of the poster?” 1 = “not at all attractive,” and 7 = “very attractive”).

Participants then were asked to respond to the same scale for perceived time crunch as used in Study 2 (\alpha = .93; Herrington and Capella 1995; Vermeir and Van Kenhove 2005). Next, the participants were asked to respond to an eight-item affect scale (e.g., “I feel good/bad (reverse-coded)/friendly/unfriendly (reverse-coded)/pleasant/angry (reverse-coded)/happy/sad (reverse-coded)”; 1 = “not at all” and 7 = “extremely”; Williams, Davies, and Chadury 2000).

Results
A feeling of time crunch. Results from a one-way ANOVA showed that the posters in the
time-availability condition elicited less feeling of time crunch than those in the baseline condition
\(M_{\text{time-available}} = 2.46, \ SD = 1.18 \) vs. \(M_{\text{baseline}} = 3.26, \ SD = 1.85; \ F(1, 94) = 6.14, \ p = .015\).

Poster design. Results from a one-way ANOVA showed that the perceived attractiveness
of the posters for the time-availability condition \(M = 3.93, \ SD = .89\) and for the baseline
condition \(M = 3.65, \ SD = .98; \ F(1, 94) = 2.12, \ p > .10\) did not differ significantly.

Affect. The eight items of the affect scale were averaged together to form an index for
affective state \(\alpha = .88\). The participants’ affective states in the time-availability condition \(M = 5.45, \ SD = .93\) did not differ from those in the baseline condition \(M = 5.31, \ SD = 1.16; \ F < 1, \ NS\).
WEB APPENDIX L

PRETEST FOR SELF-BRAND CONNECTION TOWARD EACH BRAND USED IN STUDY 5A

A total of 67 participants (M<sub>age</sub> = 21.37, 15 males; none of the participants were parents) participated in this study for a nominal payment. Participants were sequentially presented with four shampoo brands from big international FMCG companies (i.e., Vidal Sassoon and Aussie from P&amp;G, Alberto Balsam from Unilever, and GUHL from KAO). Among them, only Vidal Sassoon was available to local consumers, and the other three brands were not launched in the local market. The sequence of the four brands was randomized. For each presented brand, participants were asked to indicate their level of connection with each brand using the Inclusion of Other in the Self (IOS) scale (Aron, Aron, and Smollan 1992; Donovan and Lutz 2016).

Specifically, participants saw a series of seven Venn diagrams with various degrees of overlap between each brand and the self, and indicated which image best represented their level of connection with the brand (1 = “no or negative relationship with the brand,” and 7 = “having close relationship with the brand;” Aron, Aron, and Smollan 1992; Reimann and Aron 2009).

The results showed that consumers’ self-brand connection with Vidal Sassoon, the in-market brand, had a moderate value but considerable variation across individuals (M = 3.75, SD = 1.96), whereas those for the other three non-market brands are unanimously extremely low (Aussie: M = 1.28, SD = .74; Alberto Balsam: M = 1.31, SD = .87; GUHL: M = 1.25, SD = .84).
WEB APPENDIX M

PRETEST FOR BRAND ATTACHMENT TOWARD EACH BRAND USED IN STUDY 5B

A total of 80 participants (M_{age} = 28.56, 29 males; all of the participants were parents) participated in this study for a nominal payment. Participants were sequentially presented with two fabric softener brands from KAO company: (1) ATTACK, which was available in the local market, and (2) New Beads, which was not available in the local market. The sequence of the two brands was randomized. For each presented brand, participants were asked to indicate their level of brand attachment with each brand using a three-item seven-point scale (i.e., “I feel a bond between me and this brand of fabric softener,” “this brand of fabric softener feels like a friend to me,” “I am emotionally connected to this brand of fabric softener;” 1 = “strongly disagree,” and 7 = “strongly agree”; $\alpha = .97$ for ATTACK and $\alpha = .89$ for New Beads, respectively; Batra, Ahuvia, and Bagozzi 2012).

The results showed that the perceived brand attachment with ATTACK was medium, with considerable variance (M = 4.08, SD = 1.83), whereas New Beads was very unfamiliar to the local consumers, with little variance (M = 1.26, SD = .33).
WEB APPENDIX N

POSTTEST FOR PERCEIVED TIME NEEDED FOR SWITCHING TO THE OTHER BRAND VERSUS STICKING WITH THE DEFAULT BRAND IN STUDY 5B

A total of 101 participants (all parents; M_{age} = 36.38, 35 males) participated in this study for a nominal payment. They were randomly assigned to one of the two between-subjects conditions describing two different shopping scenarios (switching vs. non-switching).

Participants were instructed to imagine a shopping trip to purchase a fabric softener. Specifically, in the non-switching condition, the participants were asked to imagine they found only one fabric softener brand was available on the shelf and thus put it into their shopping carts. In the switching condition, the participants were first asked to imagine the same situation as in the non-switching condition but then were told they found another brand on the way to the cashier and replaced the previously chosen softener in their cart with the newly found one. Finally, all the participants were instructed to indicate the perceived time (in minutes) needed for the shopping journey. The results indicated that participants did not perceive a significant difference in time needed for the shopping trip in the switching and non-switching conditions (M_{switching} = 9.98 mins, SD = 5.30 vs. M_{non-switching} = 8.44 mins, SD = 4.92; F(1, 99) = 2.29, p > .10; log-transformed perceived time: M_{switching} = .93, SD = .27 vs. M_{non-switching} = .86, SD = .24; F(1, 99) = 1.83, p > .10).
FIGURE 1  STUDY 4: VARIETY SEEKING OF HAND SOAP AS A FUNCTION OF MOTIVATION AND TIME AVAILABILITY

![Bar chart showing variety seeking of hand soap as a function of motivation and time availability.]

- Baseline:
  - Parenting Motivation: 2.37
  - Control Condition: 2.75

- Time Available:
  - Parenting Motivation: 2.95
  - Control Condition: 2.87
FIGURE 2    STUDY 5A: VARIETY SEEKING OF SHAMPOO AS A FUNCTION OF MOTIVATION AND SELF-BRAND CONNECTION (RAW SCORE)
FIGURE 3 STUDY 5B: VARIETY SEEKING OF FABRIC SOFTENER AS A FUNCTION OF MOTIVATION AND BRAND ATTACHMENT (RAW SCORE)