

How regulatory focus influences perceived control and product choice

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Abstract

Purpose – This research aims to examine how regulatory focus influences individuals' preference for personal control strategies, which in turn affects their selection of effortful options. Across four experiments, the study tested this framework.

Design/methodology/approach – To test these hypotheses, four between-subjects laboratory experiments were conducted [Experiment 1 ($n = 261$), Experiment 2 ($n = 175$), Experiment 3 ($n = 141$) and Experiment 4 ($n = 292$)].

Findings – Experiment 1 shows that promotion-focused individuals favour primary control, whereas prevention-focused individuals favour secondary control. Experiment 2 demonstrates that a sense of "feeling right" mediates the effect of regulatory focus on control strategy choice. Experiment 3 reveals that alignment between regulatory focus and control strategy increases preference for high-effort over low-effort options. Experiment 4 replicates these effects using a real-world product and an alternative control manipulation, further confirming the mediating role of "feeling right."

Originality/value – The findings contribute to the literature by (1) establishing a novel link between regulatory focus and control preference, (2) demonstrating how regulatory fit enhances perceived control through a feeling-right mechanism and (3) illustrating that a regulatory fit can lead consumers to make high-effort product choices as a means to restore perceived control.

Keywords Regulatory focus, Perceived control, Feeling right, High-effort product choice

Paper type Research paper

1. Introduction

Consumers regularly encounter environments that either support or undermine their perceived control, the belief that one can achieve desired outcomes and prevent undesired ones (Rothbaum *et al.*, 1982; Skinner *et al.*, 1988). Loss of control can occur on a large scale, such as during the COVID-19 pandemic or on smaller scales, including work stress, health setbacks or major life transitions, whereas positive daily experiences can enhance it (Wachs, 2020; Cutright and Wu, 2023).

Perceived control is categorized into primary control, which involves changing the environment to fit one's goals, and secondary control, which involves adjusting oneself to the environment (Rothbaum *et al.*, 1982). Individuals tend to rely on these strategies depending on the situation: solvable challenges elicit primary control (e.g. health treatments, attainable goals), while less controllable circumstances elicit secondary control (e.g. chronic conditions, unattainable goals) (Hall *et al.*, 2010; Wrosch *et al.*, 2000). Primary control or secondary control are generally viewed as mutually exclusive strategies which individuals apply to overcome specific situations (Heckhausen and Schulz, 1995).

The importance of both primary and secondary control to human functioning remains a topic of debate (Cutright and Wu, 2023). For example, currently some researchers voice support for the functional primacy of primary control, highlighting the preference for this control amongst all mammals and even children (Cutright and Wu, 2023; Heckhausen and Schulz, 1995). On the contrary, counter perspective on this topic argues that one approach is not necessarily favoured or more crucial than the other for human functioning (Cutright and Wu, 2023; Gould, 1999). Importantly, preference for primary versus secondary control is linked to motivational orientations. Individuals valuing autonomy, achievement and personal growth gravitate towards primary control, whereas those prioritizing security, stability and interdependence gravitate towards secondary control (Morling and Evered, 2006; Triandis, 2001; Hay and Diehl, 2011).

Although prior research has examined how perceived control shapes consumption behaviours, the mechanisms through

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Journal of Consumer Marketing
43/2 (2026) 228–243
Emerald Publishing Limited [ISSN 0736-3761]
[DOI 10.1108/JCM-03-2025-7734]

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Received 18 March 2025
Revised 28 September 2025
4 December 2025
Accepted 17 December 2025

which this fundamental need operates in consumer contexts remain underexplored (Cutright and Wu, 2023). The current research addresses this gap by proposing that regulatory focus can guide the preference for a specific type of perceived control, a novel contribution of this work. Regulatory focus theory distinguishes two human motivational systems: promotion focus, oriented towards aspirations and gains, and prevention focus, oriented towards safety and avoidance of losses (Higgins, 1997). Activation of these systems influences decision-making, as individuals adopt strategies, such as favouring hedonic versus utilitarian products that maintain their regulatory orientation (Chernev, 2004).

We draw our arguments based on the theory of regulatory fit (Atav *et al.*, 2021; Motyka *et al.*, 2014). Promotion-focused individuals, whose core motives are linked with attainment of growth and advancement in their lives (Higgins, 1997) while focusing on autonomy and self-reliance while navigating challenges (Komissarouk and Nadler, 2014), are more likely to find a fit with primary control strategies. On the contrary, prevention-focused individuals whose core motives are linked with maintaining security and stability in their lives (Higgins, 1997) through adjustments to the current situation and seeking support from others (Komissarouk and Nadler, 2014), are more likely to find a fit with secondary control strategies. The ensuing fit will be underpinned by the “feeling right” effect and further lead to a heightened inclination towards effortful choices and behaviours.

The next section reviews theories of perceived control and regulatory focus, which form the basis for the key hypotheses of this study. This is followed by a report of four experimental studies designed to test these hypotheses. Finally, we discuss the theoretical and practical contributions, acknowledge limitations and suggest directions for future research.

2. Literature review

2.1 Perceived control and forms

Perceived control is the belief in one’s ability to influence outcomes and manage challenges (Rothbaum *et al.*, 1982; Skinner *et al.*, 1988). It sustains motivation by enabling people to enhance well-being or mitigate negative events. Threats to control arise from large-scale disruptions like the COVID-19 pandemic, which restricted mobility and increased uncertainty (Wachs, 2020; Cutright and Wu, 2023), as well as from personal stressors such as work pressure, legal battles or health issues (Cutright and Wu, 2023). Conversely, activities like exercise or workplace recognition can strengthen perceived control.

Two forms of perceived control dominate the literature: primary control, which seeks to change the environment to meet personal needs, and secondary control, which involves adapting oneself to existing circumstances (Rothbaum *et al.*, 1982). For instance, an elderly woman may persist with a heavy lawn mower (primary) or switch to a lighter one (secondary) while trimming her garden (Chipperfield *et al.*, 1999). Past literature implies that secondary control is driven by a motive to fit in, rather than a motive to exert control (Rothbaum *et al.*, 1982), which has been debated by scholars. Subsequently, scholars have described secondary control as adjusting oneself

and accepting the environment as it is (Morling and Evered, 2006).

Research suggests that the use of primary and secondary control is contingent not only on situational demands but also on motivational orientations. Rather than being interchangeable strategies, they represent different ways individuals align their motivation with external circumstances. For example, older adults may engage in primary control when motivated to address solvable challenges such as vascular conditions but shift to secondary control when their motivation is redirected towards adapting to chronic, less manageable illnesses like diabetes (Hall *et al.*, 2010). Similarly, individuals pursue achievable goals through primary control but reframe their aspirations via secondary control when goals become unattainable (Wrosch *et al.*, 2000). While some scholars argue that primary control is more effective, especially in high-pressure situations (Heckhausen and Schulz, 1995; Cutright and Wu, 2023), others emphasize that the choice of strategy is shaped by deeper motivational structures (Morling and Evered, 2006; Gould, 1999).

2.2 Motivational bases of control preferences

Rothbaum *et al.* (1982) laid the groundwork for linking control with human motivation by distinguishing primary control (changing the environment to meet one’s goals) from secondary control (adapting to it). This perspective implies that individuals’ motivational priorities shape whether they persist in altering circumstances or adjust to them. Subsequent theorists reinforced this motivational view. Morling and Evered (2006) argued that secondary control is a proactive means of achieving valued ends: people oriented towards others see accommodation as sustaining harmony, while self-focused individuals perceive it as constraining. Cross-cultural research supports this distinction, showing that collectivist contexts emphasize adjustment and interdependence (secondary control), whereas individualist contexts promote autonomy and persistence (primary control; Weisz, 1986; Triandis, 2001).

Empirical findings also connect motivational orientations with control strategies. Hall *et al.* (2010) found that success-focused motives predict the use of primary control, while avoidance motives align with secondary control. Developmental evidence reveals similar patterns: younger adults link well-being to primary control and persist even after major health crises, whereas older adults associate well-being with secondary control, adapting to chronic conditions (Hall *et al.*, 2010).

Together, this work suggests that control strategies are not merely situational responses but reflect enduring motivational dispositions. Some individuals gravitate towards primary control in pursuit of mastery and autonomy, while others favour secondary control for security and harmony. Yet most research still treats control as situationally adaptive (e.g. Hall *et al.*, 2010; Wrosch *et al.*, 2000), overlooking systematic individual differences. Addressing this gap requires a framework that explicitly links motivational orientations to control strategies, which we propose through regulatory focus theory.

2.3 Regulatory focus

Regulatory focus theory (Higgins, 1997; Crowe and Higgins, 1997) offers a framework for linking primary and secondary control to individuals' motivational orientations. The theory distinguishes between two systems: promotion focus, which emphasizes gains and aspirations, and prevention focus, which emphasizes security and obligations. Research highlights the influence of regulatory focus across domains such as autonomy and interdependence.

Lee *et al.* (2000) showed that promotion-focused individuals tend to value autonomy, self-reliance and personal achievement, whereas prevention-focused individuals prioritize conformity, interdependence and relationship preservation. Similarly, Kurman *et al.* (2015) found that promotion focus aligns with the pursuit of personal goals and autonomy in decision-making, while prevention focus aligns with collective goals and adherence to group norms. Komissarouk and Nadler (2014) further observed that promotion-focused individuals rely on autonomy and self-reliance as coping mechanisms, whereas prevention-focused individuals adapt to circumstances and seek social support when facing difficulties. At the workplace, prevention-focused employees are more likely to conform to implicit rules, such as limiting informal interactions in formal environments, while promotion-focused employees pursue opportunities more vigorously, even when inconsistent with structured norms (Lee *et al.*, 2013).

Taken together, this body of work underscores that promotion focus corresponds to independence, autonomy and self-growth, while prevention focus aligns with adjustment, interdependence and collective growth.

2.4 Hypotheses

Regulatory focus theory provides a motivational basis for understanding why individuals prefer different forms of control. Promotion focus aligns with primary control because both emphasize autonomy, persistence and mastery. Promotion-focused individuals are driven by success-oriented motives and the pursuit of growth (Higgins, 1997). Such aspirations require shaping the environment to fit personal goals. Evidence shows that promotion focus is associated with valuing autonomy and achievement (Lee *et al.*, 2000), prioritizing self-growth in decision-making (Kurman *et al.*, 2015) and persisting independently when solving problems (Komissarouk and Nadler, 2014). Promotion focus also predicts creativity and innovation under stress (Sacramento and West, 2013), underscoring the link between success-focused motives and mastery through primary control.

In contrast, prevention focus aligns with secondary control, as both emphasize interdependence, avoidance motives and the pursuit of security and harmony. Prevention-focused individuals are motivated by duties and obligations (Higgins, 1997; Crowe and Higgins, 1997), which map onto strategies of adjustment and accommodation. Studies show they value conformity, teamwork and collective goals (Lee *et al.*, 2000; Kurman *et al.*, 2015), rely on others' solutions when navigating challenges (Komissarouk and Nadler, 2014) and adapt readily to structured environments to maintain harmonious relationships (Komissarouk and Nadler, 2014). These findings demonstrate that prevention focus naturally aligns with secondary control, as both prioritize stability, security and

interdependence over individual assertion. Building on this, we propose that:

- H1. When an external event triggers either primary or secondary control, promotion-focused individuals will show a greater preference for primary control strategies, while prevention-focused individuals will show a greater preference for secondary control strategies.

2.4.1 Regulatory fit as the underpinning mechanism

While prior research has described primary and secondary control as adaptive strategies, the current framework proposes that their selection is grounded in individuals' motivational orientations. Regulatory fit theory (Higgins, 2000) provides a theoretical rationale for understanding how motivational orientations guide control strategy selection. Regulatory fit occurs when goal-striving strategies align with one's regulatory focus, generating a sense of "feeling right" about the adopted strategy (Higgins, 2005). This alignment enhances task engagement, immersion and perceived utility of outcomes (Cesario *et al.*, 2004; Avnet and Higgins, 2006; Camacho *et al.*, 2003).

For example, Cesario *et al.* (2004) found that both promotion- and prevention-focused individuals performed better in complex tasks when their execution style matched their regulatory orientation: promotion-focused individuals preferred approach strategies (focusing directly on the task), whereas prevention-focused individuals preferred avoidance strategies (managing distractions before addressing the task). Similarly, Hong and Lee (2008) demonstrated that regulatory fit increased intentions to participate in physically demanding tasks (e.g. handgrip exercises) when the pursuit strategy aligned with regulatory focus. Lee *et al.* (2013) found higher engagement with serious games when task instructions matched participants' focus: promotion-focused individuals were more motivated when advised to pursue gains (e.g. win the game and earn extra points), whereas prevention-focused individuals were more motivated when advised to avoid losses (e.g. prevent client loss). Roczniewska *et al.* (2018) showed that perceptions of fairness in organizational roles increased when responsibilities matched regulatory orientations: promotion focus aligned with creative, growth-oriented tasks, whereas prevention focus aligned with rule-based, stability-oriented tasks.

Across these studies, alignment between regulatory focus and execution style produces a "feeling right" that transfers to the task, increasing motivation and engagement. Applying this logic, promotion-focused individuals "feel right" using primary control, which emphasizes autonomy, independence and personal growth (Higgins, 1997; Sideridis and Kaplan, 2011). Conversely, prevention-focused individuals "feel right" using secondary control, which emphasizes adjustment, interdependence and adherence to norms (Lee *et al.*, 2000; Kurman *et al.*, 2015). Regulatory fit thus explains why individuals selectively adopt control strategies aligned with their motivational orientation. Based on this we posit that:

- H2. The effect of regulatory focus on preference for a control strategy will be mediated by feeling right, with this mediation moderated by the type of control triggered. Specifically, promotion-focused individuals will experience stronger feeling right when primary

(vs. secondary) control is triggered, whereas prevention-focused individuals will experience stronger feeling right when secondary (vs. primary) control is triggered, reflecting a moderated mediation process.

2.4.2 The downstream effect of fit

While *H2* explains how regulatory fit accounts for the alignment between regulatory focus and control strategies, the role of fit extends beyond shaping preferences. Regulatory fit strengthens motivational intensity by making individuals feel “right” about their chosen approach, which in turn enhances task engagement and willingness to invest sustained effort (Higgins, 2000, 2005). For example, individuals experiencing regulatory fit exerted greater effort to perform well on difficult anagram tasks (Förster *et al.*, 2001). Keller and Bless (2008) found that both promotion- and prevention-focused individuals achieved higher scores on challenging maths exams when their preparation strategies matched their regulatory orientations. Spiegel *et al.* (2004) showed that regulatory fit motivated behavioural change, such as adopting healthier diets. Hong and Lee (2008) reported greater physical endurance on demanding handgrip tasks when task execution aligned with regulatory focus. Lee *et al.* (2013) demonstrated that regulatory fit increased effort in mastering serious digital learning games requiring complex problem-solving, and Janson *et al.* (2023) found that fit encouraged deeper engagement with e-learning tools.

Cesario *et al.* (2004) suggest that the transfer of “feeling right” from regulatory fit to the task increases engagement and performance effort. Avnet and Higgins (2006) further note that this effect can spill over to unrelated tasks: Higgins *et al.* (2003) found that individuals who experienced regulatory fit in personal goal pursuit subsequently rated unrelated photographs more positively. Together, these findings indicate that regulatory fit not only enhances effort and involvement within task-relevant domains but also generates surplus motivation that can extend beyond the original context. The resulting “feeling right” fosters resilience and perseverance, which can influence subsequent behavioural decisions. Consequently, when promotion-focused individuals experience fit via primary control, and prevention-focused individuals via secondary control, this motivational drive should increase orientation towards effortful, resource-intensive choices. Based on this we proposed that:

H3. Individuals experiencing regulatory fit will prefer high-effort over low-effort options. Specifically, promotion-focused individuals will favour high-effort options when primary (vs. secondary) control is triggered, whereas prevention-focused individuals will favour high-effort options when secondary (vs. primary) control is triggered.

3. Experiment 1

3.1 Sample participants and procedure

The primary objective of Experiment 1 was to test *H1a* and *H1b*. Experiment 1 involved a 2 (Regulatory focus: Promotion-focus vs Prevention-focus) * 2 (Type of Control: Primary vs

Secondary) between-subjects design. 261 participants (151 Male, 110 Female) participated in the experiment and were randomly allocated to the experimental conditions. Participants were recruited through a convenience sampling method via the USA based online data collection platform Amazon Mechanical Turk. Participants received a small compensation for completing the surveys.

Experiment 1 was conducted in two seemingly unrelated parts. The first part involved manipulating promotion-focus or prevention-focus in participants. Using the method of Wang and Lee (2006), the regulatory focus was situationally induced in participants. Prevention-focused participants were asked to write about how their duties and obligations in life were different now as compared to when they were growing up. Promotion-focused participants were asked to write about how their hopes and aspirations in life were different now as compared to when they were growing up.

In the second part of the experiment, type of perceived control was manipulated followed by dependent variable measures. The literature illustrates that primary control is about changing the world so that it fits the self-needs, while secondary control attempts to fit in with the current world (Cutright and Wu, 2023). A popular method for manipulating personal control is autobiographical recall tasks. For example, in Whitson and Galinsky (2008), participants were asked to write short paragraphs concerning personal incidents where they felt loss of control or heightened control on their environments. Similar control manipulations have been used in papers such as Cutright and Samper (2014), Chun and Lee (2017) and Song *et al.* (2023). However, Bukowski *et al.* (2024) have questioned the validity of such recall tasks with the reasoning that thoughts generated by spontaneous recalls may be more vivid than thoughts generated by effortful recalls which may lead to different memories that can impact the effectiveness of such manipulations. Following the advice of Bukowski *et al.* (2024), the autobiographic recall tasks used in previous studies to manipulate primary and secondary control were not used for the current research. Instead, the current research used contexts which were relatable for participants to feel a sense of high or low personal control. For example, Lunardo *et al.* (2022) suggest that as an event such as lockdown compromises the freedom of individuals, it could pose a threat to their personal control. Taylor *et al.* (2022) echoed similar views about the lack of perceived control felt by individuals during situations like lockdown. Thus, both primary and secondary control were manipulated in the current research in the context of a scenario like lockdown. Both were hypothetical scenarios which involved participants browsing through news channels on a Sunday morning at their homes, while they experienced an unexpected lockdown. In the scenario meant for inducing primary control, it was stated that the local government advised citizens to exercise caution while stepping outside their homes. In the situation meant for inducing secondary control, it was stated that the local government imposed a complete restriction and mandated citizens to stay at home. The scenarios were designed based on the rationale that restrictions that are non-mandatory should capture primary control as they allow an individual some control to suit the self-need, while restrictions that are mandatory are about secondary control where one has to flow with the current situation

(Rothbaum *et al.*, 1982). The manipulations can be found in Appendix 1.

3.2 Measures

At the end of second task, participants had to provide the following ratings:

- “How likely are you to volunteer for the government to explain people the rationale behind lockdown” (1 = extremely unlikely, 7 = extremely likely).
- “How favourable or unfavourable would you be towards the lockdown” (1 = extremely unfavourable, 7 = extremely favourable).
- “How positive or negative would you be towards the lockdown” (1 = extremely negative, 7 = extremely positive).
- “How good or bad do you think is the idea of lockdown was” (1 = extremely bad, 7 = extremely good).

These items were combined to create a composite measure (Cronbach’s $\alpha = 0.70$) which was the main dependent measure in this experiment and was named as preference for control strategy. Similar measures to assess preference for a brand were used in Lee and Aaker (2004). Specifically, it was presumed that individuals would prefer restrictive ideas such as lockdown only when the type of control (primary or secondary) induced by the lockdown matched the regulatory focus of participants (promotion vs prevention). Thus, participants should prefer the lockdown more in the regulatory fit condition (promotion focused–primary control or prevention-focused–secondary control) than the regulatory non-fit condition (promotion focused–secondary control or prevention-focused–primary control).

Participants also completed of manipulation check measures, to assess the effectiveness of the regulatory focus and personal control manipulations.

The measures for assessing the effectiveness of the regulatory focus manipulations were adapted from Wang and Lee (2006). In both conditions, promotion focus and prevention focus, participants were asked to rate on a five-point scale (1 = Definitely not, 5 = Definitely yes) whether they actually thought about their hopes and aspirations/duties and obligations.

A manipulation check was also used to measure the effectiveness of perceived control. In both conditions, primary control and secondary control, participants rated their agreement or disagreement with a statement that described the restrictions stated in Task 2 as compulsory/mandatory in nature on a scale of 1 (strongly disagree) to 7 (strongly agree). Restrictions that are non-mandatory should trigger primary control as they allow an individual some control on the environment, while restrictions that are mandatory should trigger secondary control where one has to flow with the current and adjust to the situation (Rothbaum *et al.*, 1982). Finally, participants had to answer demographic questions related to age, gender, ethnicity etc.

3.3 Findings

Results of a one-way ANOVA showed that participants in the promotion focus condition thought more about their hopes and aspirations compared to participants in the prevention focus condition. [$M_{\text{promotion/hopes and aspirations}} = 4.13$, $n = 135$, $SD =$

1.14 vs $M_{\text{prevention/hopes and aspirations}} = 3.28$, $n = 126$, $SD = 1.40$], $F(1,259) = 29.49$, $p < 0.01$]. On the other hand, participants in the prevention focus condition thought more about their duties and obligations as compared to participants in the promotion focus condition [$M_{\text{prevention/duties and obligations}} = 4.31$, $n = 126$, $SD = 0.96$ vs $M_{\text{promotion/duties and obligations}} = 3.78$, $n = 135$, $SD = 1.23$], $F(1,259) = 15.09$, $p < 0.01$]. Thus, the regulatory focus manipulation was deemed successful.

Results of a different one-way ANOVA showed that the extent to which participants felt that the lockdown that was described to them was compulsory/mandatory in nature was higher in the secondary control condition than in the primary control condition [$M_{\text{agreement/secondary control}} = 5.56$, $n = 131$, $SD = 1.49$ vs $M_{\text{agreement/primary control}} = 5.06$, $n = 130$, $SD = 1.58$], $F(1,259) = 6.79$, $p < 0.05$]. Thus, the control manipulation was deemed successful too.

To test *H1*, a two-way ANOVA was conducted with regulatory focus (promotion–focus vs prevention–focus) and type of control (primary vs secondary) as the independent variables and preference for lockdown as the dependent variable.

The two-way interaction was significant [$F(1,257) = 13.79$, $p < 0.01$]. The two-way interaction was probed further through planned contrasts. Results of planned contrasts showed that promotion-focused participants preferred the lockdown more when it triggered primary (vs secondary) control [$M_{\text{promotion/primary control}} = 5.51$, $n = 67$, $SD = 1.23$ vs $M_{\text{prevention/primary control}} = 4.94$, $n = 63$, $SD = 1.32$, $t(257) = 2.77$, $p < 0.01$]. It was further observed that prevention-focused participants preferred the lockdown more when it triggered secondary (vs primary) control [$M_{\text{prevention/secondary control}} = 5.54$, $n = 63$, $SD = 0.82$ vs $M_{\text{promotion/secondary control}} = 5.03$, $n = 68$, $SD = 1.22$, $t(257) = 2.48$, $p < 0.05$]. The results of the two-way interaction strongly support *H1*.

The first experiment also controlled for several external variables. In Experiment 1, participants responded to questions on demographic variables such as age, income, education level, ethnicity, country of residence and gender towards the end of the survey. It was observed that the three-way interaction between regulatory focus, type of control and each of these demographic variables on attitude towards lockdown was not significant ($p > 0.05$). Furthermore, the inclusion of these covariates in the main model did not alter the significance of two-way interaction between regulatory focus and type of control. Thus, the external variables did not impact the main findings from Experiment 1.

3.4 Discussion

In *H1*, it was proposed that promotion focused individuals (vs prevention focused individuals) will prefer incidents or events which trigger primary control. Prevention focused individuals (vs promotion focused individuals) will prefer incidents or events which trigger secondary control. The first experiment used the context of lockdown and altered the level of restrictions imposed by the lockdown to trigger primary or secondary control. The findings from Experiment 1 supported our first hypothesis that promotion-focused individuals infer a fit between their regulatory orientation and primary control strategies and therefore adapt them in difficult situations whereas prevention-focused individuals infer a fit between their

regulatory orientation and secondary control strategies and therefore adapt them in difficult situations. Since regulatory fit occurs when goal directed tasks match with one's regulatory orientation and generate a sense of "feeling right" about the tasks being executed, Experiment 2 tests whether the alignment between promotion focus and primary control/prevention focus and secondary control is determined by a sense of feeling right that is perceived by promotion focused or prevention focused individuals using the appropriate control strategies.

4. Experiment 2

4.1 Sample participants and procedure

The primary objective of Experiment 2 was to find a process-level explanation for the findings of Experiment 1. In other words, we wanted to empirically test our *H2*. About 175 participants (104 Male, 68 Female, 3 Other) were recruited through the US based crowdsourcing platform Clickworker for this experiment through convenience sampling method and were randomly allocated to the experimental conditions. Participants received a small compensation for participating in the surveys. The experimental design was 2 (Type of control: Primary vs Secondary) between-subjects. The regulatory focus of participants was operationalized as a chronic variable.

The second experiment was also conducted in two seemingly unrelated parts. The first part was used for measuring the chronic regulatory focus of participants. The BIS/BAS scale of Carver and White (1994) was used for the experiment. The scale has been cited by about 5330 articles as per the Web of Science citation index. The scale consists of seven items (each having end points as 1 = strongly disagree, 7 = strongly agree) that measure prevention-focus (e.g. "I worry about making mistakes", "criticism or scolding hurts me quite a bit, "I feel worried when I think I have done poorly at something" etc.) and five items (each having end points as 1 = strongly disagree, 7 = strongly agree) which measure promotion focus (e.g. "When I am doing well at something, I love to keep at it", "When I see an opportunity for something I like, I get excited right away" etc.). After this, the second part involved the perceived control manipulation using the lockdown scenarios. The scenarios were similar to Experiment 1. Both scenarios involved browsing through news channels on a Sunday morning at their homes, while they experienced an unexpected lockdown with restrictions that were mandatory to follow (secondary control) or restrictions that were not mandatory to follow (primary control). The manipulations can be found in Appendix 1.

4.2 Measures

At the end of second task, participants had to rate their preference for the two different types of lockdown which triggered either primary or secondary control on measures similar to Experiment 1. These items were then combined (Cronbach's alpha = 0.89) to create the dependent measure - preference for control strategy. After responding to the dependent measure, participants responded to a process measure named as "feeling right" on a scale of 1 (= not at all) to 7 (= a lot). The measure was adopted from Lee *et al.* (2010). Specifically, participants reported to what extent did they feel right about the lockdown scenarios described earlier.

Participants then responded to a manipulation check measure assessing the effectiveness of the primary/secondary control manipulation. This measure was similar to Experiment 1. Participants also completed demographic measures similar to our first experiment.

4.3 Findings

Results of a one-way ANOVA showed that the extent to which participants felt that the lockdown that was described to them was compulsory/mandatory in nature was higher in the secondary control condition than in the primary control condition [$(M_{\text{agreement/secondary control}} = 3.81, n = 83, SD = 2.02$ vs $M_{\text{agreement/primary control}} = 2.99, n = 92, SD = 1.31)$], $F(1,173) = 10.31, p < 0.01$. Thus, the control manipulation was deemed successful.

The average score of the prevention-focused items (Cronbach $\alpha = 0.64$) was subtracted from the average score of the promotion-focused items (Cronbach $\alpha = 0.79$) to calculate the net regulatory scores of participants. Higher scores on the net regulatory focus scale indicates higher levels of promotion focus and lower scores indicate higher levels of prevention focus.

Subsequently, a moderation test was done using PROCESS macro – Model 1 (Hayes, 2018). Regulatory focus was the independent variable, type of control (primary vs secondary) was the moderator and preference for control strategy was the dependent variable. The two-way interaction between regulatory focus and type of control was significant ($\beta = 1.48, t = 3.86, p < 0.001$). A deeper probe into the interaction showed that when the type of control was secondary, prevention focus participants preferred the lockdown more than promotion-focused participants ($\beta = -0.80, t = -2.79, p < 0.01$). On the contrary, when the type of control was primary, promotion focus participants preferred the lockdown more than prevention focused participants ($\beta = 0.67, t = -2.79, p < 0.01$). Thus, the results reaffirmed support for *H1*.

Then, a moderated mediation analysis using the PROCESS macro - Model 8 (Hayes, 2018), established a significant indirect effect of the independent variable-regulatory focus on the dependent variable-attitude towards lockdown through the mediator - to what extent did participants feel right about the lockdown- at both levels of the moderator – secondary control (CI from -0.82 to -0.12) and primary control (CI from 0.16 to 0.82). The overall index of moderated mediation was also significant (CI from 0.44 to 1.46). Level of confidence for all confidence intervals in the output was 95%.

Thus, the results of the moderated mediation analysis supported *H2* and established a fit between regulatory focus and type of control, with feeling right mediating this effect to influence attitude towards primary or secondary control strategies. The demographic variables measured in Experiment 2 did not alter the main findings of the experiment.

4.4 Discussion

The second experiment was primarily conducted to test *H2*. In our second study, we used a chronic regulatory focus scale, while our first study had manipulated regulatory focus situationally. Furthermore, we had used similar manipulation for the type of control using the lockdown scenarios from Study 1. Our findings showed that we could replicate *H1*, albeit with

the chronic regulatory focus scale. This enhances generalizability as the literature has not only described regulatory focus as a chronic disposition, but also as a situational variable (Higgins, 1997). More importantly, the second study provided support for the fit hypothesis, i.e. when a type of control (e.g. primary) fitted with a regulatory focus (e.g. promotion), individuals felt right about the lockdown. Next, we report our third experiment where we wanted to test our *H3*.

5. Experiment 3

5.1 Sample participants and procedure

Experiment 3 was designed and conducted to test *H3*. As per *H3*, individuals prefer to choose options which require them to exert high effort when their external environments activate a control strategy that is congruent with their regulatory focus. Specifically, promotion-focused individuals show a greater inclination towards high effort options over low effort ones when external events activate primary rather than secondary control strategies. Conversely, prevention-focused individuals show a stronger preference for high-effort options over low effort ones when external events activate secondary rather than primary control strategies.

About 141 participants (72 male and 69 female) were recruited through a convenience sampling method via the US based crowdsourcing platform Clickworker for this experiment and received a small compensation for participation. Participants were randomly allocated to the experimental conditions. The third experiment used a 2 (Type of control: Primary vs Secondary) between-subjects design. Participants in each experimental condition read about a high-effort and a low-effort product description. The regulatory focus of participants was operationalized as a chronic variable in the experiment.

High- and low-effort product choices provide a sound implementation of “effortful versus non-effortful options” as articulated in *H3*. Prior research highlights that products differ in the extent of cognitive, physical or temporal investments they demand from consumers (Shiv and Fedorikhin, 1999; Cutright and Samper, 2014). Choosing a high-effort product shows intent to commit greater resources and persistence, whereas selecting a low-effort product reflects readiness for convenience and minimal investment (Muehlbacher and Kirchler, 2009; Norton et al., 2012; Inzlicht et al., 2018). Moreover, high-effort versus low-effort product choices have been effectively implemented in prior studies examining personal control and self-regulation (e.g. Cutright and Samper, 2014; Kim et al., 2016), further affirming the validity of using a high effort/low effort product in the present context.

The third experiment was conducted in seemingly unrelated parts. The first part was used to measure the regulatory focus of participants. The BIS/BAS scale of Carver and White (1994) was used to measure regulatory focus. In the second part subjects were introduced to the perceived control manipulation through the lockdown scenarios (similar to our first two studies). In the third part, after reading the lockdown-related scenarios, participants read descriptions of low-effort and high-effort fitness products (stimuli in Appendix 2). The product descriptions were adopted from Cutright and Samper (2014). Subsequently, participants were asked to choose between the low-effort and high-effort fitness products. This was followed

by a manipulation check of the level of effort associated with the fitness products and a manipulation check of the type of control (primary or secondary) triggered by the lockdown descriptions. The manipulation check for assessing the mode of control triggered by the lockdown descriptions was same as in the previous experiments. Participants also completed demographic measures similar to the first two experiments.

5.2 Findings

Results of a one-way ANOVA showed that the extent to which participants felt that the lockdown that was described to them was compulsory/mandatory in nature was higher in the secondary control condition than in the primary control condition [$(M_{\text{agreement/secondary control}} = 5.00, n = 70, SD = 1.45$ vs $M_{\text{agreement/primary control}} = 4.44, n = 71, SD = 1.62)$], $F(1,139) = 4.72, p < 0.05$. Based on the findings, the control manipulation was considered successful.

Results of a chi-square test showed that the a significantly larger number of participants ($n = 102$) felt that the high effort product required them to exert more effort in getting the desired results as compared to the low effort product [$(n = 39)$], $\chi^2(1) = 28.15, p < 0.001$. Thus, the high-effort and low-effort product manipulations worked successfully in Experiment 3.

The primary objective of Experiment 3 was to test *H3* and identify whether a fit between regulatory focus and control strategies impacted choice of high effort/low effort products. First, average score of the prevention-focused items (Cronbach $\alpha = 0.67$) was subtracted from the average score of the promotion-focused items (Cronbach $\alpha = 0.79$) to calculate the net regulatory scores of participants. Higher scores on the net regulatory focus scale indicate higher levels of promotion focus and lower scores indicate higher levels of prevention focus.

Subsequently, a moderation test was done using PROCESS macro-Model 1 (Hayes, 2018). Regulatory focus was the independent variable, type of control (primary vs secondary) was the moderator and the choice between high and low effort product was the dependent variable. The two-way interaction between regulatory focus and type of control was significant ($\beta = 2.47, z = 3.39, p < 0.001$). A deeper probe into the interaction showed that when the type of control was secondary, regulatory focus had a significant effect on product choices ($\beta = -1.53, z = -2.62, p < 0.05$). In other words, a decrease of net regulatory focus scores (which indicates higher levels of prevention focus) leads to higher motivation to choose high-effort products in the secondary control condition. The interaction also showed that when the type of control was primary, regulatory focus had a significant effect on product choice ($\beta = 0.94, z = 2.17, p < 0.05$). In other words, an increase of net regulatory focus scores (which indicates higher levels of promotion focus) leads to leads to higher motivation to choose high-effort products in the primary control condition. Findings therefore supported *H3*. The demographic variables measured in Experiment 3 did not alter its main findings.

5.3 Discussion

The third experiment tested *H3* by examining whether fit between regulatory focus and type of control induced by external environment increases the motivational intensity of individuals to work harder and find greater compatibility with options which require deeper engagement through high effort.

The results supported *H3*: promotion-focused individuals preferred high-effort options when the external environment triggered primary control, while prevention-focused individuals preferred high-effort options when the external environment triggered secondary control. These findings demonstrate that a fit between regulatory focus and control strategies induced by the external enhances motivation and directs individuals towards effortful choices.

Experiment 4 was designed with four objectives: to replicate the effects observed in Experiment 3, to increase generalizability of the findings obtained in Experiment 3 with a control manipulation in a new setting, to increase external validity of the findings from Experiment 3 with a real time product available in online e-commerce platforms, and to find process level evidence of the findings obtained from Experiment 3.

6. Experiment 4

6.1 Sample participants and procedure

Experiment 4 was designed and conducted to test *H3*. About 292 postgraduate students from a leading Australian university (141 male, 141 female, 10 others) were recruited for this experiment through convenience sampling method and participated in the study in exchange for course credits. Participants were randomly allocated to the experimental conditions. Experiment 4 used a 2 (Regulatory focus: Promotion-focus vs Prevention-focus) * 2 (Type of Control: Primary vs Secondary) * 2 (Effort Required: Low vs High) between-subjects design.

The fourth experiment was conducted in four parts. In the first part of the experiment, regulatory focus was situationally induced in participants. Using the method of Wang and Lee (2006), participants in prevention-focused condition were asked to write about how their duties and obligations in life were different now as compared to when they were growing up. Participants in promotion-focused condition were asked to write about how their hopes and aspirations in life were different now as compared to when they were growing up.

Then, participants responded to the manipulation check measures to test the effectiveness of the regulatory focus manipulations. Using a seven-point scale 1(=not at all) to 7(=very much), participants indicated the extent to which they thought their hopes and aspirations or duties and obligations in Part 1.

In Part 2 of the experiment, participants were assigned to condition that induced either primary or secondary control. Participants read about a traffic congestion scenario characterized by unavoidable traffic congestion and long delays during their daily commute to work. In the primary control condition, the scenario emphasized efforts to improve the current situation (e.g. taking an alternate route to avoid congestion). In the secondary control condition, the scenario highlighted adapting to the current situation (e.g. accepting delays and listening to podcasts during the commute) – (stimuli in Appendix 3). The stimuli is in accordance with the definition of primary and secondary control given in literature which suggests that individuals using primary control as an adaptive strategy attempt to take control of their environment by attempting to alter the current scenario while individuals using

secondary control as an adaptive strategy make efforts to fit into their environment by adjusting to the current situation (Rothbaum *et al.*, 1982; Morling and Evered, 2006). Furthermore, Roy and Mukherjee (2023) noted that traffic disruptions could lead to loss of perceived control. Thus, in the current study, traffic congestions were selected as the context for manipulating personal control.

Then, participants responded to the manipulation check measures measuring personal control. Specifically, participants responded to what extent the scenarios reflected attempts to change the traffic congestion situation instead of adapting to it (primary control) or adapting to the traffic congestion situation instead of attempting to change it (secondary control) on a scale of 1(=strongly disagree) to 7(=strongly agree).

In Part 3 of the experiment, participants were exposed either to the high effort or low effort manipulation (stimuli in Appendix 4). To demonstrate external validity, a book titled “Improving Your Social Skills” by Daniel Wendler, available for purchase at leading e-commerce platforms such as Amazon was chosen as the context for the effort manipulation task. The same book was also used as part of an effort manipulation task by Jia and Wyer (2022). The high effort and low effort manipulations were therefore adapted from Jia and Wyer (2022). Specifically, participants were presented with either of two alternative book descriptions, both intended at improving social skills but varying in the effort they required for getting desired outcomes. The high-effort product outlined that readers would need to show sustained engagement with the material, reflect deeply upon the lessons and work persistently to see meaningful improvement in their social skills, highlighting hard work as a prerequisite for attaining benefits from the product. In contrast, the low-effort product specified that merely reading the book would be adequate to acquire essential competencies on social skills, underscoring low effort to attain desired outcomes. Subsequently, participants responded to two manipulation check measures for the effort manipulations. They indicated whether one would need to work hard or work little improving social skills through the book on scales of 1(=strongly disagree) to 7(=strongly agree). Next, participants responded to the dependent measure about their probability to purchase the book titled “Improving Social Skills” written by Daniel Wendler on a scale of 1(=strongly disagree) to 7(=strongly agree). Finally, participants responded to a mood measure adopted from Cutright and Samper (2014). Participants responded to how unhappy or happy they were on a scale of 1 (=very unhappy) to 7(= very happy). Participants also responded to a measure testing the effectiveness of their social skills on a scale of 1 (= worse than average) to 3(= better than average) and set of demographic measures such as age and gender.

6.2 Findings

Results of a one-way ANOVA showed that participants in the promotion focus condition thought more about their hopes and aspirations compared to participants in the prevention focus condition. [$M_{\text{promotion/hopes and aspirations}} = 4.71, n = 146, SD = 0.84$ vs $M_{\text{prevention/hopes and aspirations}} = 3.18, n = 146, SD = 1.27$], $F(1,290) = 148.63, p < 0.01$]. On the other hand, participants in the prevention focus condition thought more about their duties and obligations as compared to participants

in the promotion focus condition [$M_{\text{prevention/duties and obligations}} = 4.58, n = 146, SD = 0.81$ vs $M_{\text{promotion/duties and obligations}} = 3.06, n = 146, SD = 1.18$], $F(1, 290) = 164.27, p < 0.01$]. Thus, the regulatory focus manipulation was deemed successful.

Results of a second one-way ANOVA revealed that participants in the primary control condition expressed stronger agreement that the traffic congestion scenario reflected efforts to change the situation rather than adapt to it, compared to participants in the secondary control condition. [$M_{\text{agreement/primary control}} = 5.21, n = 145, SD = 1.00$ vs $M_{\text{agreement/secondary control}} = 2.93, n = 147, SD = 1.37$], $F(1, 290) = 264.91, p < 0.01$. On the contrary, participants in the secondary control condition expressed stronger agreement that the traffic congestion scenario reflected efforts to adapt to the situation rather than changing it, compared to participants in the primary control condition [$M_{\text{agreement/secondary control}} = 4.27, n = 147, SD = 1.75$ vs $M_{\text{agreement/primary control}} = 3.79, n = 145, SD = 1.86$], $F(1, 290) = 5.29, p < 0.05$. Based on the findings, the control manipulation was considered successful.

Results of a third one-way ANOVA indicated that participants exposed to the high-effort product expressed stronger agreement with the statement that using the product would require working hard to achieve the desired results, compared to those exposed to the low-effort product description [$M_{\text{agreement/high effort/working hard}} = 4.83, n = 149, SD = 1.35$ vs $M_{\text{agreement/low effort/working hard}} = 2.76, n = 143, SD = 1.86$], $F(1, 290) = 176.57, p < 0.01$. On the contrary, participants exposed to the low-effort product expressed stronger agreement with the statement that using the product would require working little to achieve the desired results, compared to those exposed to the high-effort product description [$M_{\text{agreement/low effort/working little}} = 4.87, n = 149, SD = 1.38$ vs $M_{\text{agreement/high effort/working little}} = 2.68, n = 143, SD = 1.39$], $F(1, 290) = 180.64, p < 0.01$. Thus, the effort manipulations worked effectively.

Experiment 4 was designed to replicate the findings of Experiment 3 in support of *H3*, using a control manipulation different from the earlier experiments and an effort manipulation involving a product with greater external validity. To this end, a three-way interaction was tested, with regulatory focus (promotion vs prevention), type of control (primary vs secondary) and effort level of the product description (high vs low) as factors and probability of purchasing the high or low effort product as the dependent variable. The three-way interaction was significant [$F(1, 284) = 27.51, p < 0.001$]. Pairwise contrasts revealed that promotion-focused individuals showed higher preference for the high effort product when they adapted a primary (vs secondary) control strategy in the traffic congestion situation [$M_{\text{promotion focus/primary control/high effort}} = 4.75, SD = 1.34, n = 36$, vs $M_{\text{promotion focus/secondary control/high effort}} = 3.26, SD = 1.58, n = 35, t(1, 284) = 3.61, p < 0.001$]. Pairwise contrasts further revealed that prevention-focused individuals showed higher preference for the high effort product when they adapted a secondary (vs primary) control strategy in the traffic congestion situation [$M_{\text{prevention focus/secondary control/high effort}} = 5.62, SD = 1.26, n = 37$ vs $M_{\text{prevention focus/primary control/high effort}} = 3.26, SD = 1.58, n = 35, t(1, 284) = 5.13, p < 0.001$].

Infact, pairwise contrasts also demonstrated that promotion-focused individuals showed higher preference for the high effort

(vs low effort) product when they adapted a primary control strategy in the traffic congestion situation [$M_{\text{promotion focus/primary control/high effort}} = 4.75, SD = 1.34, n = 36$, vs $M_{\text{promotion focus/primary control/low effort}} = 3.87, SD = 2.13, n = 39, t(1, 284) = 2.18, p < 0.05$]. On the contrary, prevention-focused individuals showed higher preference for the high effort product (vs low effort) product when they adapted a secondary control strategy in the traffic congestion situation [$M_{\text{prevention focus/secondary control/high effort}} = 5.62, SD = 1.26, n = 37$ vs $M_{\text{prevention focus/secondary control/low effort}} = 4.21, SD = 1.88, n = 39, t(1, 284) = 3.54, p < 0.001$]. The inclusion of covariates such as mood, social skill levels and other demographic variables did not alter the main findings of the experiment. Overall, the results reaffirm support for *H3*.

A moderated mediation analysis was conducted using the PROCESS macro (Model 8; Hayes, 2018), with regulatory focus (promotion vs prevention) as the independent variable, type of control (primary vs secondary) and effort linked to product usage (high vs low) as moderators, and the probability of choosing a high- or low-effort product as the dependent variable. The analysis yielded a significant overall index of double moderated mediation, 95% CI [0.02, 1.72]. This suggests that the effect of regulatory focus on product choice was jointly dependent on type of control and effort related to product usage, functioning through the mediator of “feeling right” about the product choice.

6.3 Discussion

Experiment 4 was designed with multiple objectives. First, it aimed to replicate the findings of Experiment 3, which demonstrated that regulatory focus and type of control strategy jointly influence the choice between high- and low-effort products. Consistent with this, Experiment 4 revealed similar effects in the context of products for improving social skills, thereby replicating prior results. Second, to enhance generalizability, Experiment 4 employed a different control manipulation: while Experiment 3 used a lockdown scenario, Experiment 4 used traffic congestion and daily commuting scenario. Third, it extended external validity by introducing a real-world product – a book on improving social skills – as the high-effort option. Finally, Experiment 4 confirmed that the “feeling right” experience mediates the relationship between regulatory focus, type of control and choice of high-effort products. Collectively, these results provide additional support for *H3* and demonstrate the robustness of the findings from Experiment 3.

7. Discussion

7.1 Summary of findings

Across four experiments, we found strong evidence that regulatory focus shapes the control strategies adapted by individuals which in turn impacts their choice of high effort or low effort options. In Experiment 1, promotion-focused individuals prioritizing autonomy and advancement (Higgins, 1997; Komissarouk and Nadler, 2014) expressed stronger compatibility with *primary control* strategies (i.e. taking actions to change their environment), whereas prevention-focused individuals, emphasizing security and adjustment to the situation (Higgins, 1997; Komissarouk and Nadler, 2014),

preferred *secondary control* strategies (taking actions to align with the current environment). In Experiment 2, we found that this compatibility between regulatory focus and personal control strategies was driven by a subjective “feeling right” experience – participants felt more right about the control strategy when the it matched their regulatory focus, and this feeling mediated their preference for primary/secondary control as an adaptive strategy in challenging environments.

Moving to preferences for high effort options, Experiment 3 showed that this regulatory fit between focus and control strategy impacted consumers’ willingness to prefer high effort products. When individuals experienced a fit between their regulatory focus and control strategies (promotion/primary or prevention/secondary), they reported greater probability of selecting a high-effort fitness product compared to a low-effort fitness product. In other words, compatibility between regulatory focus and adaptive control strategies motivated individuals to work hard to get the desired outcomes which boosted preference for high effort products. Experiment 4 replicated these results with a real time consumer product and a different control manipulation, again finding that fit between regulatory focus and control strategy heightened preference for the high-effort product. Importantly, Experiment 4 confirmed that this effect functioned via the same “feeling right” mediator. Thus, findings from these experiments reveal a coherent picture: It showed that *fit* between regulatory focus impacts choice of control strategy and the fit between regulatory focus and control strategy motivates consumers to choose effortful products. The experiments also reveal when control strategy matches regulatory orientation of individuals, they feel “right” about it, and as a result they feel motivated to work hard and choose products which require them to work hard to get their desired benefits from the product

7.2 Theoretical contributions

This research makes several key theoretical contributions. First, it extends regulatory focus theory (Higgins, 1997; Lee *et al.*, 2000) by articulating a link between control strategies and regulatory orientation of individuals. Classic regulatory focus theory (Higgins, 1997; Lee *et al.*, 2000) suggests that promotion focused individuals are characterized by personal advancement and autonomy whereas prevention-focused individuals are noted for collective growth and adherence to norms. This article shows that promotion-focused individuals consider primary control strategies as an effective mechanism for growth and advancement, whereas prevention-focused individuals consider secondary control strategies as an appropriate mechanism for maintaining safety and security. This connects the idea of eager vs vigilant means for promotion or prevention goal attainment (Crowe and Higgins, 1997; Kurman *et al.*, 2015) with adaptive mechanisms for goal attainment such as primary or secondary control. In doing so, we extend the impact of regulatory focus theory framework (Lee *et al.*, 2000) beyond goals and message framing to include adaptive strategies such as personal control mechanisms.

Second, the current article contribute to perceived control and coping literatures (Rothbaum *et al.*, 1982; Cutright and Wu, 2023) by showing that individuals’ selection of primary or secondary control mechanisms to cope with challenges are not merely reactive strategies that are decided instantaneously to

navigate external circumstances once a difficult situation arises. Individuals’ choice of control strategies is driven by their motivational states which is linked to their regulatory orientations (Higgins, 1997). In fact, a sense of feeling right results from implementation of control strategies that are compatible with the regulatory orientations of individuals which subsequently motivates individuals to maintain control over the external environment by working hard. This motivation to work hard can also influence consumption decisions such that a match between regulatory focus and control strategies results in choice of effortful products i.e products which assure individuals about the best results only when adequate effort is applied. Previous research on personal control focuses on the type of actions (changing the environment vs flowing with the current) (Moring and Evered, 2006) taken by individuals to operate through difficult environments. The current research adds to this stream of work by suggesting that the decision to try and change the situation or adjusting to it is dependent on the regulatory focus of individuals.

Third, this research advances regulatory fit theory by identifying a new form of fit and extending its downstream effects. Regulatory fit theory posits that match between the manner of goal pursuits (approach vs avoidance) and regulatory focus of individuals impacts individual’s motivations to persist with their efforts (Crowe and Higgins, 1997) and impacts product choices (Lee and Aaker, 2004). The current research provides evidences that matching consumers’ regulatory focus with her personal control strategy creates a subjective sense of “feeling right” which intensifies their motivations to exert effort and impacts subsequent product choices. This adds to the fit literature by showing that fit effects can result not only from compatibility between regulatory focus and manner of goal pursuit (approach vs avoidance) but also from a match between regulatory focus and personal control strategy (primary vs secondary). In sum, the current article connects and extends three streams of theory – regulatory focus, control mechanisms and regulatory fit – demonstrating how they jointly explain when and why consumers favour primary and secondary control strategies.

7.3 Managerial implications

Based on our findings, managers can infer consumers’ regulatory focus through behavioural patterns and situational cues. For example, by observing how consumers respond to differently framed messages (e.g. gain vs loss) or their preferences for risk and novelty, managers can adopt dynamic segmentation strategies. Prior research supports this view, showing that such behavioural indicators can reliably predict promotion or prevention focus (Lee and Aaker, 2004; Gino and Margolis, 2011; Zhou *et al.*, 2017). Related studies also demonstrate that retailers can reasonably infer buyers’ regulatory focus from the retail context itself. For instance, luxury stores tend to evoke a promotion focus, whereas hardware stores are more likely to induce a prevention focus (Das *et al.*, 2020). Likewise, hedonic websites are more appealing to promotion-focused consumers, while utilitarian websites primarily attract prevention-focused consumers (Ashraf *et al.*, 2016). Drawing on this literature and our current findings, managers can design targeting strategies,

communication messages and high-effort product positioning that align with consumers' inferred regulatory focus.

First, managers should connect their product messages to consumers' regulatory focus. For segments that are predominantly promotion-focused, marketing communications should focus on self-growth and autonomy (primary control). For example, ads might highlight how using the product allows consumers to be self-reliant and empowered (e.g. courses which focus on new skills such as AI allowing consumers to advance their knowledge about AI and leap ahead of others) For prevention-focused segments, communications should emphasize safety and security For instance, a marketing communication could emphasize how the product helps a consumer to fit in seamlessly to the current situation (courses which focus on new skills such as AI allowing consumers flow with current trends and fit into the new environment built around AI). Such regulatory fit emphasizing appropriate control strategy may attract consumers to seek actively for such products.

Second, when positioning high-effort products (e.g. DIY kits, products which require customized configurations, products which require self-assembling), should emphasize the suitable control frame. For promotion audiences, frame it as a product which allows one to work hard and be in direct control of the situation ("Take control of your product – configure or assemble it your way, you learn more as you work more on the product"). For prevention audiences, frame it as a product which is convenient to understand and lessens your effort ("in house demo and step by step guidance will be provided for product configuration or assembly, so you can build the product easily without having to work hard). Prior research shows consumers may seek effortful items like DIY furniture to feel more in control of the product (Norton *et al.*, 2012; Vuculescu *et al.*, 2021); the current research suggests that for consumers to get the right sense of control, the product needs to match their regulatory orientations. For cultures which nurture promotion orientation (Higgins, 2008; Higgins and Pinelli, 2020), primary control will be the preferred adaptive strategy, thus focusing on hard work that comes along with DIY furniture may be a good fit for such cultures. However, for cultures which follow prevention orientation (Higgins, 2008; Higgins and Pinelli, 2020), focusing more on helping consumers to learn about the product quickly and start using it rather than exerting effort in assembling the product will be an appropriate method to pursue.

8. Limitations and future research

This work has limitations that suggest directions for future research. We operationalized perceived control using lockdown and traffic scenarios, consistent with prior literature on primary (changing the world to meet needs) versus secondary control (fitting in with the world). While this allowed comparability across our four experiments, future studies could examine other contexts of low control (e.g. major life events). Further research might also test the role of perceived control and regulatory focus across cultures, given differences between independent (Western) and interdependent (Eastern) orientations. Finally, as we focused on fitness equipment as a high-effort product, future work could investigate other categories (e.g. shoes) to assess whether similar decisions emerge when regulatory focus and control type align.

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Further reading

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Appendix 1 (experiment 1-3)

Primary control:

Imagine you live in a country where, on a quiet Sunday morning, you hear on the news that the local government has implemented a voluntary lockdown in response to recent developments impacting public welfare. These developments have led authorities to encourage citizens to stay home and avoid visiting locations such as hotels, restaurants, malls, beaches, parks and theatres. While strongly advised, this measure is voluntary, and there are no legal consequences for those who choose otherwise.

To ensure public understanding of this measure, the government is inviting volunteers to help communicate its purpose to citizens. Volunteers can register online to receive further information.

Secondary control:

Imagine you live in a country where, on a quiet Sunday morning, you hear on the news that the local government has imposed a mandatory lockdown in response to recent developments impacting public welfare. These developments have led authorities to require citizens to stay home and avoid visiting locations such as hotels, restaurants, malls, beaches, parks and theatres. Compliance with this directive is mandatory, and those who do not adhere may face legal consequences.

To ensure public understanding of this measure, the government is inviting volunteers to help communicate its purpose to citizens. Volunteers can register online to receive further information.

Appendix 2 (experiment 3)

Figure A1 Low Effort Fitness

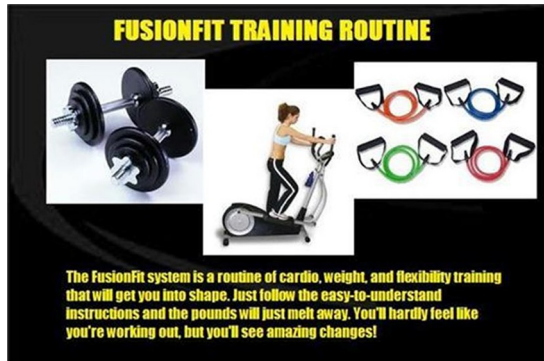


Figure A2 High Effort Fitness



Appendix 3 (experiment 4)

Primary control:

Imagine the following scenario:

Every day, you experience traffic congestion and long commutes on your way to work. Eventually, you realize you need to do something about it. So, you wanted to change the current situation - you decide to take an alternate route which is less congested during your commute.

Secondary control:

Imagine the following scenario:

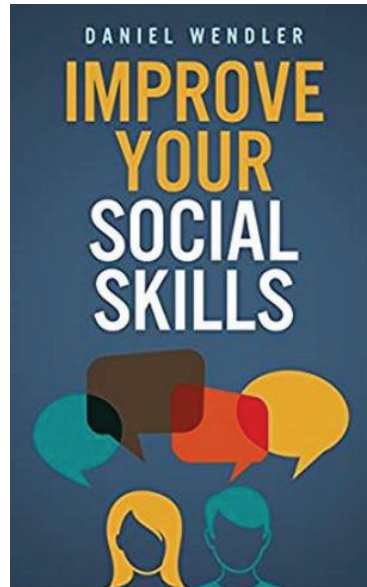
Every day, you experience traffic congestion and long commutes on your way to work. Eventually, you realize there's little you can do to avoid it. So, you flow with the current situation - accepting the delays and start listening to podcasts during your commute.

Appendix 4 (experiment 4)

Figure A3 High Effort Product: Daniel Wendler: Work Harder to be More Sociable

(Experiment 4) - High Effort Product:

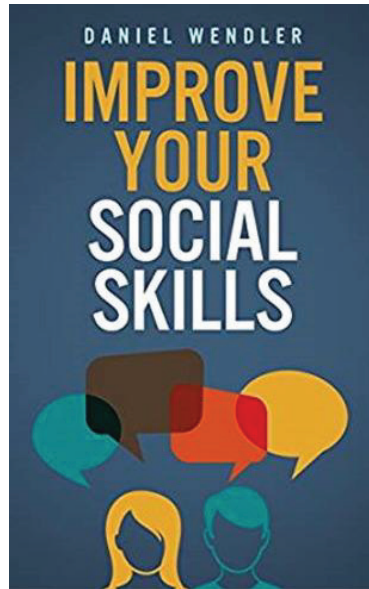
Daniel Wendler: Work Harder to be More Sociable



Brief description of the book: *Improve Your Social Skills* is a comprehensive, practical guide to social skills. It contains 200+ pages of step-by-step explanations of social interaction, written by a professional social skills coach whose TEDx talk on overcoming the social challenges of Asperger's Syndrome has been viewed over 130,000 times. With the book, you will see big improvement on your social skills. **So not only by reading the book, but also by internalizing and practicing the information, you will need to work hard to make yourself sociable.**

Figure A4 Low Effort Product

(Experiment 4) - Low Effort Product:



Brief description of the book: *Improve Your Social Skills* is a comprehensive, practical guide to social skills. It contains 200+ pages of step-by-step explanations of social interaction, written by a professional social skills coach whose TEDx talk on overcoming the social challenges of Asperger's Syndrome has been viewed over 130,000 times. **With the book, you will see easy improvement on your social skills. So just by reading it, you will learn everything you need to make yourself sociable.**

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