Exercise Your Mind - Physical Activity Alters Attribute Weighing in Consumer Choice

Laura Zimmermann, London School of Economics, UK
Amitav Chakravarti, London School of Economics, UK

In five studies, we demonstrate that both regular and single bouts of physical activity can influence consumers’ subsequent judgments and decisions in unrelated domains. We find that physical activity leads consumers to weigh different pieces of information more appropriately and improves reliance on relevant product information, controlling for various confounds.

[to cite]:

[url]:
http://www.acrwebsite.org/volumes/1024617/volumes/v45/NA-45

[copyright notice]:
This work is copyrighted by The Association for Consumer Research. For permission to copy or use this work in whole or in part, please contact the Copyright Clearance Center at http://www.copyright.com/.
Exercise Your Mind –
Physical Activity Alters Attribute Weighing in Consumer Choice
Laura Zimmermann, London School of Economics and Political Science, UK
Amitav Chakravarti, London School of Economics and Political Science, UK

EXTENDED ABSTRACT
Across five studies we find that physical activity (PA) leads to improved decision-making in unrelated decision domains. Specifically, we find that PA (both measured and manipulated) leads consumers to weigh different pieces of information more appropriately and improves reliance on relevant product information. The results were robust to the inclusion of several control variables in the analysis.

PA has tremendous health benefits as decades of medical and epidemiological research show (e.g., Moore, et al., 2016; Morris, Heady, Raffle, Roberts, & Parks, 1953). In addition, researchers have started to investigate the complex relationship between PA, physical wellbeing and brain health. In particular, beneficial effects of PA have been found for emotional health, memory and executive functions (Hopkins, Davis, Vantieghem, Whalen, & Bucci, 2012). Overall, studies point to the direction that PA enhances cognitive functions and protects against the development of neurodegenerative diseases (Kramer & Erickson, 2007). Despite the abundant evidence of PA benefits for cognition, little research has investigated the effect of PA on judgment and decision-making. We hypothesized that both regular and single bouts of PA would lead to spillover effects on unrelated judgments and decision-making due to improved information integration. In particular, we predict that decision makers will be better able to ignore unimportant features and not neglect important features of their decision environment.

Our conjecture is based on very recent neuroscience research. Raichlen, et al. (2016) that argues that PA, such as running, represents a complex activity for the brain. It involves sophisticated, simultaneous processing and monitoring of internal and external information. According to them, areas of the brain related to cognitive functions such as planning, inhibition, monitoring, attentional switching, and multi-tasking are activated when engaging in PA. Nevertheless it remains unclear whether PA also influences how people make decisions in real-life domains that are unrelated to exercising, and how they integrate different pieces of information to make such unrelated decisions.

In particular, we investigated spillover effects of PA on two well-researched consumer decision paradigms – the desirability / feasibility choice conflict (Liberman & Trope, 1998) and the dilution effect (Meyvis & Janiszewski, 2002; Nisbett, Zukier, & Lemley, 1981). If PA improves the integration of different pieces of information, we would expect people who engage in PA to apply more appropriate weights to different decision attributes. In the feasibility-desirability choice conflict it is commonly observed that decision-makers overly focus on the desirability features and neglect feasibility features; we expect PA would lead to less or no neglect of feasibility attributes in product choices, which require trade-offs between desirability and feasibility attributes. Conversely, in the dilution paradigm (wherein people are unable to ignore irrelevant information and end up “diluting” their judgments) this would lead to smaller or no dilution effects in product judgments when consumers are faced with irrelevant information.

In studies 1-3 we find that PA affects how decision-makers make desirability-feasibility trade-offs in consumer decisions. Usually, decision-makers tend to overly contrite on the desirability considerations, often at the expense of feasibility considerations. Our findings indicate that PA leads consumers to focus less overly on desirability and consider feasibility criteria more in choices that require trade-offs.

In Study 1 we tested exercisers before vs. after visiting a gym (N=90) in a consumer choice task that required making trade-offs between feasibility and desirability attributes (adapted from Liu, 2008). Participants were asked to imagine they wanted to go on a hiking trip and were presented two options. One of them was characterised by high desirability (scenery with creeks and waterfalls) and low feasibility (limited parking, 70 miles away). The other option was characterised by low desirability (scenery with boulders and bushes) and high feasibility (plenty of parking, 40 miles away). Participants were asked to choose between both options and to rate how much they focused on the desirability attribute and the feasibility attribute. Results showed that participants considered desirability and feasibility attributes more equally after exercising compared to before (F(1, 88) = 4.64, p = .034). The results were robust to the inclusion of several control variables in the analysis.

Study 2 (N=257, online) compared participants who engage in regular PA to non-active individuals. Non-active individuals rated their likelihood to purchase a high desirability/low feasibility option significantly higher than their likelihood to purchase a low desirability/high feasibility option (M_{HDLF} = 61.00 vs. M_{LDHF} = 44.79). Regular PA individuals on the other hand showed no difference in their likelihood to purchase (M_{HDLF} = 53.11 vs. M_{LDHF} = 52.89, F(1, 253) = 4.24, p = .041).

Study 3 (N=59, parkrun UK) shows that regular runners with significantly better average 5 kilometre running performances tended to choose a low desirability/high feasibility option rather than a high desirability/low feasibility option ($\chi^2(1) = 4.87, p = .027, \beta = -.134, p = .042$). Overall, these findings indicate that PA leads decision-makers to focus less overly on desirability and consider feasibility criteria more when making choices that require trade-offs.

In studies 4 and 5 (total N=527, online), we find that regular PA seems to improve a decision-maker’s ability to rely on relevant vs. irrelevant information. When faced with irrelevant product information, consumers find it difficult to ignore irrelevant information, and typically “dilute” their judgments (i.e., their product judgments are lower). Two studies reveal that PA aids people’s ability to focus on relevant information and ignore irrelevant information in product judgments. When faced with irrelevant information in addition to relevant information, sedentary subjects significantly diluted (i.e., lowered) their product judgments. However, there was no significant dilution effect for PA individuals (F(1, 283) = 4.56, p = .033).

Across these sets of studies, it appears that PA leads decision-makers to weigh different pieces of information more appropriately. The results remain unchanged after controlling for various confounding variables including demographics (e.g., education and income), affect and personality traits (e.g., conscientiousness). Our findings have important implications since they extend the benefits of PA to a novel and important domain - attribute weighing in consumer decision-making. Finally, our findings shed light on potential remedies against bias in situations when people tend to underweight the importance of feasibility attributes and overweight irrelevant information.
REFERENCES