

Supplemental Materials

Experiment 1

Participants

Americans were about 4 years older on average (U.S.: $M = 39.41$, $SD = 13.94$; Denmark: $M = 35.26$, $SD = 16.60$, $t(220) = 2.02$, $p = .05$), smoked about 2 more cigarettes per day (U.S.: $M = 18.10$, $SD = 6.81$; Danish: $M = 15.83$, $SD = 5.41$; $t(220) = 2.75$, $p = .01$), and reported stronger nicotine cravings (U.S.: $M = 3.18$, $SD = 0.81$; Danish: $M = 2.95$, $SD = 0.76$, $t(220) = 2.09$, $p = .04$). However, participants from both countries started smoking at similar ages (U.S.: $M = 15.96$, $SD = 3.63$; Denmark: $M = 16.36$, $SD = 4.15$; $t(220) = -.758$, $p = .45$) and did not differ in the number of quit attempts over the last five years (U.S.: $M = 2.22$, $SD = 2.56$; Denmark: $M = 2.26$, $SD = 1.58$; $t(220) = -.158$, $p = .87$). In sum, the samples were generally similar with respect to gender, age, and smoking characteristics.

Methods

Smoking intensity. To ensure that the same amount of time passed between smoking the two cigarettes we timed the participants to smoke the first cigarette for 7 min (length of time determined via pilot testing). If participants took longer than 7 min, we asked them to put out the cigarette. If they finished before 7 min, we asked them to relax and read a magazine until the 7-min mark. The second cigarette was not timed.

We used the topography device to assess for each puff three variables: volume (each inhaled puff in milliliters), duration (length of puff in ms) and average flow (rate of inhalation in ml/s). These variables operate outside the smoker's awareness and, thus, cannot be self-reported (Shahab et al., 2008). To prepare the data for analysis, we excluded the first and the last puff to reduce error (De Jesus, Hsin, Faulkner, & Prapavessis, 2013). Then, for each participant we

calculated six smoking intensity scores: volume, duration, and flow assessed at T1 (before the manipulation) and at T2 (after the manipulation). For each participant we examined the six scores for outliers and winsorized the data so that scores outside of 3 *SD* were changed to the 3 *SD* mark. We did this for volume (3 outliers for T1; 4 outliers for T2), duration (1 outlier for T1; 1 outlier for T2), and average flow (2 outliers for T1; 2 outliers for T2) at the participant level. Then, all three scores for volume, duration and average flow from both T1 and T2 were converted to z-scores and then averaged to calculate the final two smoking intensity scores. Because the total number of puffs per cigarette varied for each person, we constructed variables using the first five puffs only (Aung, Pickworth, & Moolchan, 2004), as well as all puffs (De Jesus et al., 2013). These two scores were correlated ($r(218) = .86, p < .001$) and the results were similar regardless of the measure that was used. All analyses using smoking topography at T2 controlled for the T1 smoking intensity score to examine smoking intensity change across time.

Cognitive depletion. Cognitive depletion was calculated using the Stroop test. The Stroop test requires participants to quickly identify the color of words in which the word itself is either congruent (e.g., the word yellow is written in yellow color) or incongruent (e.g., the word yellow is written in blue color). The test also included colored symbols (a series of five asterisks) as a control. The participants were required to press specific buttons on the keyboard that matched the color of the word/symbol that was shown on screen. There were four colors used in the test—red, blue, yellow and green. The entire task comprised of 6 practice trials with feedback, 6 practice trials without feedback, and 5 sets of 12 trials each (60 total trials), in that order. The test administered 20 congruent, 20 incongruent and 20 control trials in a randomized order. During the trials, participants watched a fixation target (a white cross) leading into a word or symbol on the screen after 200 ms. The word or symbol remained on the screen until the proper

color-key was pressed. The response time was measured by the software. No participant reported having difficulty with this task due to color blindness.

Responses that exceeded the 3000 ms mark were deleted (31 outliers/ 0.46% of U.S. data; 92 outliers/ 1.38% of Denmark data) as suggested by Macleod (1991). Response latencies that were 3 *SDs* greater than the global mean (U.S.: $M = 990.08$, $SD = 350.49$; Denmark: $M = 944.30$, $SD = 379.95$) were treated as outliers and winsorized (140 outliers/ 2.09% of U.S. data; 154/ 2.31% of Denmark data), as per the practice in previous research (Inzlicht, McKay, & Aronson, 2006). Additionally, we removed the Stroop data from one Danish participant because of the high number of outliers scores that needed to be winsorized in their trials (24/60 scores, 40%). Then, the response times for the three different types of trials (congruent, incongruent, control) were averaged separately. To reduce positive skew in the data, the three averaged response times were log-transformed. A final Stroop interference score was produced for each participant by subtracting the congruent trial averages from the incongruent trial averages, with higher scores reflecting greater cognitive depletion. Participants showed the expected effect of answering more quickly in congruent ($M = 908.19$, $SD = 232.96$) than incongruent ($M = 1084.82$, $SD = 325.79$) trials, $t(220) = -14.90$, $p < .001$.

Experiment 2

Method

Cognitive depletion. We requested participants to stop after 20 trials (the minimum required by the website <http://cognitivefun.net/test/2> to generate a score) and participants then copied their scores into Qualtrics. We asked participants to complete the test twice (first time as practice; we used the second test results). We winsorized the scores (9 outliers/4.8% of data) and then log-transformed them to reduce the skew.

Materials.

Stigma reminder manipulation. Participants were randomly assigned to a smoking stigma condition or a control (age) condition. In the smoking condition, we asked participants to “Please describe a specific event or situation in which you experienced mistreatment or discrimination because of your smoking. This should be a significant event or situation you personally experienced that negatively affected you as an individual and/or as a member of this group. Mistreatment and discrimination could be in areas such as: looking for work, health insurance, romantic relationships, doctor visits, and everyday interactions with strangers, friends, family and co-workers. You must provide detailed information below about this situation so that we can understand what the situation was and how it made you feel. You must write at least 50 words below.” The participants in the control condition were given identical instructions using the word *age* instead of *smoking*.

References

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