Subject: Re: news quote
Date: Sunday, 19 February 2023 at 4:10:19 pm Australian Eastern Daylight Time
From: Llew Mills
To: Shiv Sudhakar
Attachments: millsetal2023_JPsychpharm_OLplaceboCaffeine.pdf

Hi Shiv

Thanks for your interest in my work. Paper attached. Please see my responses in red below. Could you please send me a link if you publish something on the website?

All the best

Llew

From: Shiv Sudhakar <shivsudhakar79@gmail.com>
Date: Sunday, 19 February 2023 at 3:09 pm
To: Llew Mills <llew.mills@sydney.edu.au>
Subject: news quote

Hi Dr. Mills,

I'm a physician and also contribute articles to the health and lifestyle section for Fox News Digital.

I'm writing an article about your coffee study.

Do you have a copy of the paper?

I was wondering if you could answer some questions that I could use as a quote for the article:

1)Could you explain the methods section in layman's terms?

We recruited heavy coffee drinkers (>= 3 cups per day) and made them abstain from all sources of caffeine for 24 hours. When they came in we measured their withdrawal symptoms. We then allocated them to three groups. One group, the deceptive group, we gave decaf but lied to them and told them it was regular, caffeinated coffee. Another group, the Open-Label group, we gave decaf and told them the truth that it was decaf. The third group, the control group, we gave water to and told them truthfully it was water. 45 minutes after they drank their beverage we measured their withdrawal symptoms again.

2)Why was there a "deceptive group?" -- Could the study just have had a control group and a decaf coffee group?

Yes, we could have done that. But this was the third in a series of experiments with similar methods, all of which had a Deceptive group and an open-label group. We wanted to replicate the results of those again, and compare them to a new group, the control group. The ability to compare the amount of caffeine withdrawal reduction under different types of information.

I was confused by this:

"There was a significant 9.5-point reduction in caffeine withdrawal in the Open-Label group (95% confidence interval (CI): 4.7, 14.3; $p=0.002$), which was 8.6 points less than the Deceptive group (95%CI: 0.4, 16.8; $p=0.014$) but 8.9 points greater than the Control group."

3)The “open label” group had a 9.5 point reduction but this 9.5 point reduction was 8.6 less (reduction of points) than the deceptive group?

Yes. Journals have very tight word limits so sometimes you are forced to sacrifice clarity for brevity. The Deceptive group had an estimated 9.5+8.6=18.1-point reduction. The Open-Label had an 8.6-point reduction, the control group a 9.5-8.9=0.6-point reduction.

4)What were the limitations to the study?

Many and varied (see the paper). The major one was the absence of a given water + 4mg caffeine/told water group. All decaf has trace amount of caffeine in it. One cup of ours had 4mg. We think it unlikely this small a dose of caffeine could reduce withdrawal as much as was observed in the Open-Label group among 24-hour abstinent heavy coffee drinkers, however at the moment it remains a possibility.

5)Was there a reason the study chose to wait only 24 hours after stopping coffee and only 45 minutes after the decaf coffee to assess withdrawal symptoms?

The reasons were entirely practical. This was the methodology in our three prior experiments and we wanted to replicate the results of those. Replication is everything in science. As for why we chose those conditions in the first place, again practical. Our participants were mostly students participating for course credit. Expecting them to stay off all forms of caffeine for more than 24 hours would have been unrealistic. The 45-min duration the same, we only had so many hours of student credit allocated to us and we wanted to get as many subjects as possible.

6)Did the study assess how much baseline coffee the subjects were drinking (and if they were drinking any other caffeinated beverages when they abstained from coffee)?

Yes. We got them all to fill out a questionnaire when they arrived. It asked questions about how much of a wide range of caffeinated products they consumed each week.

7)What does "conscious expectancy” mean?

That’s what you consciously expect to happen. Why not simply say ‘expectancy’? Well because we believe there are unconscious expectancies, events we unconsciously expect to occur after other events, in this case expecting withdrawal reduction after drinking coffee. The participants in the open-label group did not expect their withdrawal to decrease after drinking decaf (we know, we asked them) but nevertheless it did decrease. We think this happened because of unconscious expectancies, another way of saying conditioning. Years of drinking coffee means there is a strong unconscious and conscious association in the minds of coffee drinkers between all the stimuli surrounding coffee drinking – the taste, the smell, the warmth of the cup etc – and their withdrawal being reduced. The open-label group did not have the conscious expectancy of withdrawal reduction, but we believe they had a strong unconscious expectancy and this is what led to the reduction in their withdrawal.

8)Anything else you want to add?

This is an interesting result that has now been replicated three times. But more study is definitely needed!

9)What do you think the implications of the study is?

People who are trying to give up caffeine may find that drinking a cup of decaf when their cravings are at their peak may help reduce their withdrawal for long enough to ride out the worst of it and not give in to temptation

10) This is your title: a senior research associate at the University of Sydney School of Addiction Medicine, in Australia.

Yep that's right.

I'm trying to turn it in by Sunday or Monday night.

—Shiv