O Outlook

Re: [SCS] We need to see your data

From Sarwat Amin <amin43@purdue.edu>

Date Wed 3/26/2025 12:25 PM

To Guda, Sumeeth Krishna <sguda@purdue.edu>

That works for me. Thanks! Should I send you a meeting invite?

Best,
Sarwat

From: Guda, Sumeeth Krishna <sguda@purdue.edu>
Sent: Wednesday, March 26, 2025 12:23 PM
To: Sarwat Amin <amin43@purdue.edu>
Subject: Re: [SCS] We need to see your data

How about this Friday from 11:30-12:30.

Sumeeth Guda

sguda@purdue.edu | Purdue MS Statistics 2025 | MATH G160 | Linkedin

From: Sarwat Amin <amin43@purdue.edu>
Sent: Wednesday, March 26, 2025 12:22 PM
To: Guda, Sumeeth Krishna <sguda@purdue.edu>
Subject: Re: [SCS] We need to see your data

Hi Sumeeth,

I hope you are doing well and have had a great spring break. I was wondering if I could get a consultation with you anytime soon. I am available anytime tomorrow except 2-2:30pm. I could also meet with you on Friday(anytime before 10:30am or between 11:30am and 2pm) or any other day/date.
Let me know when you are available.

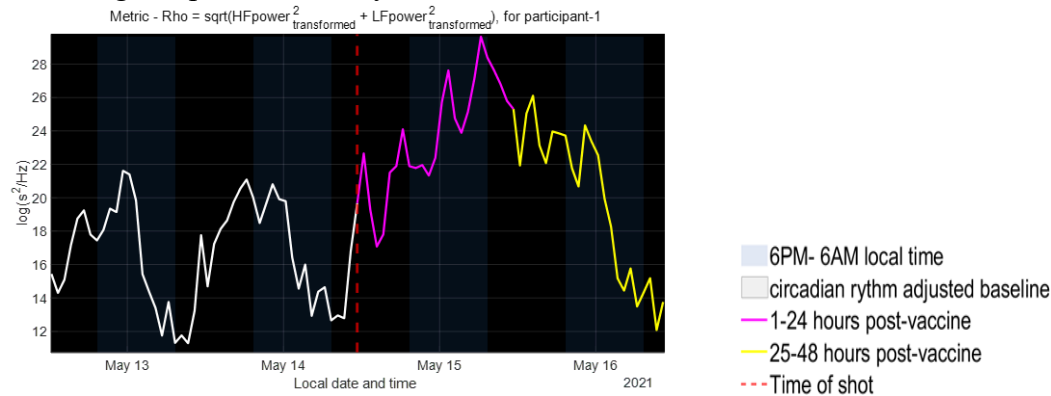Sincerely,
Sarwat

From: Sarwat Amin <amin43@purdue.edu>
Sent: Tuesday, February 18, 2025 7:20 AM
To: Guda, Sumeeth Krishna <sguda@purdue.edu>
Subject: Re: [SCS] We need to see your data

Hi Sumeeth,

I apologize for the delay in getting back to you. I have attached an excel sheet with data from one person who received COVID-19 vaccine ('SCS_data_sharexlsx'). We have similar data for 83 other participants.

The columns represent every hour, the rows represent 22 different metrics that we are working with. The first row contains the time information in hours. Since, we want to identify a deviation from what the 'normal' is for this person after they receive their vaccine, the first row i.e., the time information is relative to time of shot, so time = [00 00 00] would be the hour of vaccination. The rows contain hourly averages of the 22 different metrics.

The following is a plot of four days of continuous data from the excel file shared.

Metric - Rho = $\sqrt{HFpower^2_{transformed} + LFpower^2_{transformed}}$, for participant-1

Legend:
- 6PM- 6AM local time
- circadian rythm adjusted baseline
- 1-24 hours post-vaccine
- 25-48 hours post-vaccine
- Time of shot

I would ideally like to address the following questions:

1. All of the 22 metrics we have are affected by the circadian rhythm. As you can see in the attached plot. There is variation in the data throughout the day due to this reason. For datasets like this, how do we define a baseline to be able to compare the effects of vaccination?

2. We implemented a baseline computation process of our own and determined the duration of response to vaccination for each participant and for each of the 22 metrics (attached 'Duration_Demographics_all'). We regressed these duration values and demographics(BMI, age, gender) against self-reported symptoms (response variable = 1 for reported symptoms, 0 for no symptoms). I would like to double check the results of the stepwise binary regression with you. We want to find out the association between any of the 22 metrics, gender, age, BMI and hour of vaccination with the response variable.

Sincerely,
Sarwat

From: Guda, Sumeeth Krishna <sguda@purdue.edu>
Sent: Monday, February 17, 2025 5:25 AM
To: Sarwat Amin <amin43@purdue.edu>
Subject: [SCS] We need to see your data

Hello Sarwat,

I looked at your application, and it indicated that you collected all your data. Is it possible for you to share the dataset with me along with any important information regarding it (Which variables are the independent variables, hypotheses you have about the data, etc). This would be extremely helpful to know ahead of time before we all meet tomorrow.

Best,

Sumeeth

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