

Provided By



FloraWorks TruCBN Softgels

Sleep Study
December 2025

For **TruCBN**

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The goal of the analysis was to answer a number of questions concerning participants experience with Sleep before, during and after use of FloraWorks TruCBN Softgels. Responses from participants were measured over time (29 days) comparing responses from the following data sets:

1. Enrollment
2. 7-days without TruCBN Softgels (daily + weekly assessments)
3. 21-days with TruCBN Softgels (daily + weekly assessments)
4. Final assessment on day 29.

This study consisted of 207 participants, who answered a number of questions at different time points. However, there were 20 participants who did not use the product (NOTE that N=13 participants did not respond to using the product on any study day), and another 23 who opted out of the study at some point after enrollment, and they were therefore dropped from all analyses.

Linear, generalized, and ordinal mixed-effects models that accounted for the dependent nature of the data (i.e., participants provided responses at multiple time periods, along with before and during product use, and these dependencies need to be accounted for) were utilized in all inferential statistical analyses.

The tables below show of participant adherence and the demographic characteristics of the full sample and the number of participants who enrolled and completed the study.

PARTICIPANT RETENTION

Category	N (187)
100%	24.1%
> 90%	47.1%
> 80%	56.7%
> 70%	64.7%
< 70%	23.2%
Opted Out	12.3%

The above Figure shows the percent of total participants who completed different amounts of total questions asked.

Category	N
Enrollment	164
Week 1 (Day 7)	149
Week 2 (Day 14)	132
Week 3 (Day 21)	117
Week 4 (Day 28)	110
Exit Survey (Day 29)	107

The above Figure shows the number of individual participants who answered the specific set of questions on the day indicated under "Category".

PARTICIPANT DEMOGRAPHICS

Gender (N=164)	N (%)
Female	113 (68.9%)
Male	47 (28.7%)
Non-binary	1 (0.6%)
Prefer not to say	3 (1.8%)

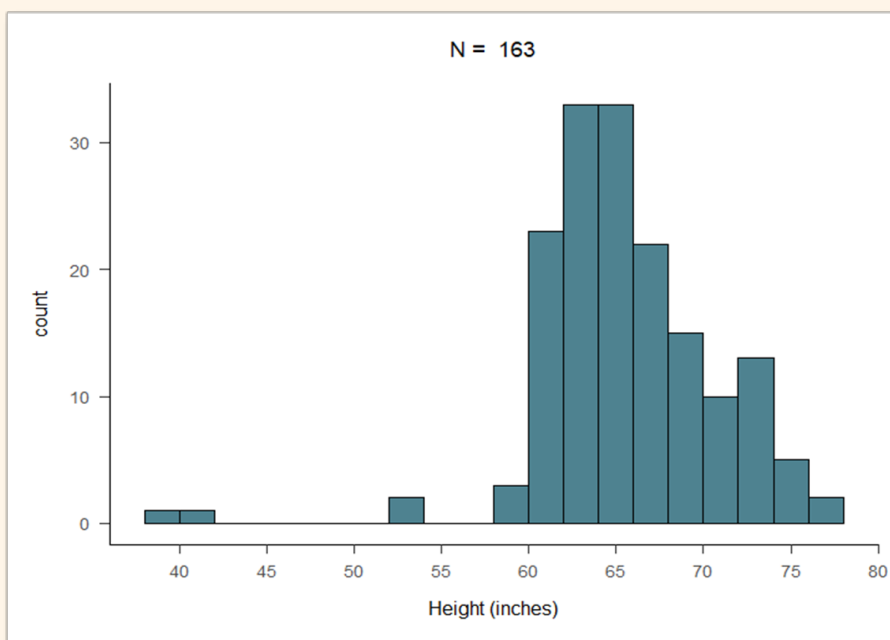
Age Category (N = 164)	N (%)
21-30	9 (6.1%)
31-40	40 (26.2%)
41-50	48 (31.1%)
51-60	43 (23.2%)
61-70	20 (12.2%)
70+	4 (1.2%)

Weight (N = 164)	N (%)
100-125	12 (7.3%)
126-150	26 (15.9%)
151-175	25 (15.2%)
176-200	40 (24.4%)
201-225	14 (8.5%)
226-250	19 (11.6%)
250+	28 (17.1%)

Ethnicity (N = 164)	N (%)
Native American, Alaskan Native, or Native Hawaiian	3 (1.8%)
Asian/Pacific Islander	4 (2.4%)
Black or African American	26 (15.9%)
Hispanic	12 (7.3%)
White/Caucasian	107 (65.2%)
Multiple ethnicity/Other	12 (7.3%)

Parental Status (N = 164)	N (%)
Child(ren) 17 or younger	32 (19.5%)
Child(ren) 18 or older	39 (23.8%)
No	93 (56.7%)

Number of Children <18 (N = 32)	N (%)
1	19 (59.4%)
2	6 (18.8%)
3	2 (6.2%)
4	2 (6.2%)
More than 4	3 (9.4%)



Education (N = 164)	N (%)
Less than high school	3 (1.8%)
High school graduate, diploma, or the equivalent (e.g., GED)	22 (13.4%)
Some college, no degree	36 (22%)
Trade/technical/vocational training	13 (7.9%)
Associate's degree	27 (16.5%)
Bachelor's degree	44 (26.8%)
Master's degree	16 (9.8%)
Doctorate degree	3 (1.8%)

Employment Status (N = 164)	N (%)
Full time	78 (47.6%)
Part time	30 (18.3%)
Unemployed	33 (20.1%)
Retired	23 (14%)

Marital Status (N = 164)	N (%)
Married	66 (40.2%)
Single	57 (34.8%)
Divorced	20 (12.2%)
Living as Married	12 (7.3%)
Separated	4 (2.4%)
Widowed	5 (3%)

Supplement Factors (N = 465)	N (%)
Availability (in-stock or on menu)	48 (10.3%)
Nutritional facts (calories, sugar, etc)	23 (4.9%)
Evidence/data on product quality and performance	122 (26.2%)
Recommendation from someone you trust	43 (9.2%)
Flavor	25 (5.4%)
Brand reputation/familiarity	36 (7.7%)
Ingredients/Formulation	93 (20%)
Price	75 (16.1%)

Household Income (N = 164)	N (%)
Under \$20,000	23 (14%)
\$20,001 – \$40,000	30 (18.3%)
\$40,001 – \$60,000	23 (14%)
\$60,001 – \$80,000	20 (12.2%)
\$80,001 – \$100,000	26 (15.9%)
\$100,001 - \$150,000	23 (14%)
\$150,001 - \$200,000	8 (4.9%)
\$200,001 or over	11 (6.7%)

Preferred Format (N = 164)	N (%)
Pill/Capsule/Tablet	24 (14.6%)
Tincture	1 (0.6%)
Edible/Gummy	45 (27.4%)
Dissolve strips	1 (0.6%)
Drink/beverage	2 (1.2%)
Shots (1.5-2oz bottles)	3 (1.8%)
No preference	87 (53%)
Other	1 (0.6%)

Response	Other format
1	Pill or smoke

Industry (N = 121)	N (%)
Architecture and engineering	1 (0.8%)
Arts, design, entertainment, sports, and media	1 (0.8%)
Building and grounds cleaning and maintenance	2 (1.7%)
Business and financial operations	7 (5.8%)
Community and social services	4 (3.3%)
Computer and mathematical	2 (1.7%)
Construction and extraction	3 (2.5%)
Education, training, and library science	14 (11.6%)
Healthcare practitioner, technical services and support	7 (5.8%)
Farming, fishing, and forestry	2 (1.7%)
Food preparation and service	7 (5.8%)
Government and public administration	3 (2.5%)
Installation, maintenance, and repair	2 (1.7%)
Legal or law services	2 (1.7%)
Life, physical, and social science	3 (2.5%)
Management Office and administrative support	6 (5%)
Personal care and service	9 (7.4%)
Production and manufacturing	3 (2.5%)
Security, emergency, and investigative services	1 (0.8%)
Sales and related	13 (10.7%)
Transportation, material moving and warehousing	4 (3.3%)
Other	25 (20.7%)

Response	Other Industry Entries
1	Technology
2	mortgages
3	Traffic control
4	Insurance
5	Customer service
6	Entertainment
7	Retail
8	EHS consulting
9	Real estate
10	Package handler
11	Hospitality
12	Laundry
13	Digital Marketing
14	Freelance gig work
15	Renewable Energy
16	Inventory
17	Silversmithing
18	Higher education nonprofit
19	Mental health
20	Call center
21	Furniture
22	Accounting
23	Caregiver
24	Nonprofit

Cannabis Use, Two Weeks Prior

Consumption Frequency (N = 164)	N (%)
Never	93 (56.7%)
1-3 days	34 (20.7%)
4-6 days (1-3 days per week)	31 (18.9%)
7-11 days (4-5 days per week)	5 (3%)
Daily	1 (0.6%)

Response	Other Administration Form
1	Smoke
2	Flower

Administration (N = 104)	N (%)
Cartridges	13 (12.5%)
Concentrates	6 (5.8%)
Flower	30 (28.8%)
Edibles	32 (30.8%)
Beverages	9 (8.7%)
Tinctures	4 (3.8%)
Pills/capsules	8 (7.7%)
Other	2 (1.9%)

During Study Substance Use

Cannabis Use During Study (N = 164)	N (%)
No	125 (76.2%)
Yes	39 (23.8%)

Alcohol consumption (N = 164)	N (%)
No	125 (76.2%)
Yes	39 (23.8%)

Caffeine consumption (N = 164)	N (%)
No	55 (33.5%)
Yes	109 (66.5%)

Life Event Impacting Sleep (Past Two Weeks)

(N = 164)	N (%)
No	131 (79.9%)
Yes	33 (20.1%)

Impact on sleep (N = 33)	N (%)
Minor	4 (12.1%)
Moderate	13 (39.4%)
Significant	16 (48.5%)

What life event? (N = 33)	N (%)
Work stress	11 (33.3%)
Family death or illness	9 (27.3%)
Divorce/Break up	1 (3%)
Change in personal health	5 (15.2%)
Other	6 (18.2%)
Prefer not to say	1 (3%)

Response	Other life event
1	A monitor was placed on my leg for step counting. I tried not to lay on it.
2	Family dynamics changing
3	Stressful living situation
4	Disappointed in relationship
5	School
6	Diagnosis of my daughter with autism. Stress involved with all the coordination of therapies.

Sleep Trackers Used Regularly

Sleep Trackers Used Regularly (N = 164)	N (%)
I don't use one	106 (64.6%)
Oura Ring	8 (4.9%)
Garmin	6 (3.7%)
Fitbit	9 (5.5%)
Apple Watch	24 (14.6%)
Other	11 (6.7%)

Response	Other sleep tracker you wear/use regularly
1	Alterme
2	AmazFit Bip
3	Samsung Health
4	Samsung watch
5	Amazfit Bip 5
6	Samsung Galaxy
7	Samsung
8	Galaxy watch
9	Fossil hybrid

WEEKLY COMPARISONS

The Weekly Comparisons look at the changes report in the validated assessment tools used in this study: WHO5 and PROMIS Sleep Disturbance.

For these measures, in addition to calculating if there was a statistically significant change across the cohort, we looked at Interaction Models.

Interaction Models are helpful for understanding heterogeneity of treatment effects and allow you to avoid misleading “on-average” conclusions to better inform population-specific strategies with more nuance. Such subgroup analyses move beyond “average effects” and begin to approximate the precision public health framework.

Example: If Product A is shown to improve sleep, but the improvement is statistically larger in older adults than in younger adults, that would represent an age × treatment interaction.

The Interaction Models used in this report include:

- Dose
- Product Use Consistency
- Age
- Gender
- Weight

Note:

The interaction variable Product Use Consistency (‘Use Consistency’) categorizes participants based on their average weekly product usage frequency over the three monitored weeks. Participants were grouped as having usage significantly below average (<-1 SD = 2 or less), around the average (Mean = 3.67 +/- 1 SD = 1.67), or significantly above average ($>+1$ SD = 5.33 or greater).

Similarly, the interaction variable ‘Dose’ categorizes participants based on their average daily product dose consumed over the three monitored weeks. Participants were grouped as having dosages significantly below average (<-1 SD = 0.85 or less), around the average (Mean = 1.29 +/- 1 SD = 0.44), or significantly above average ($>+1$ SD = 1.73 or greater)

Well-Being Score

Was there a change in Well-Being scores?

Questionnaire: WHO-5 Well-being Index

Answer: Yes, there was a statistically significant change in Well-Being (p -value $< .05$). This change was in the expected positive direction.

Overall Well-Being Scores were measured on a scale of 0-100 using the WHO-5 Well-Being Index (WHO-5). This is a validated questionnaire from the research community to measure well-being.

The following table shows the WHO-5 Well-being categories and their corresponding scores.

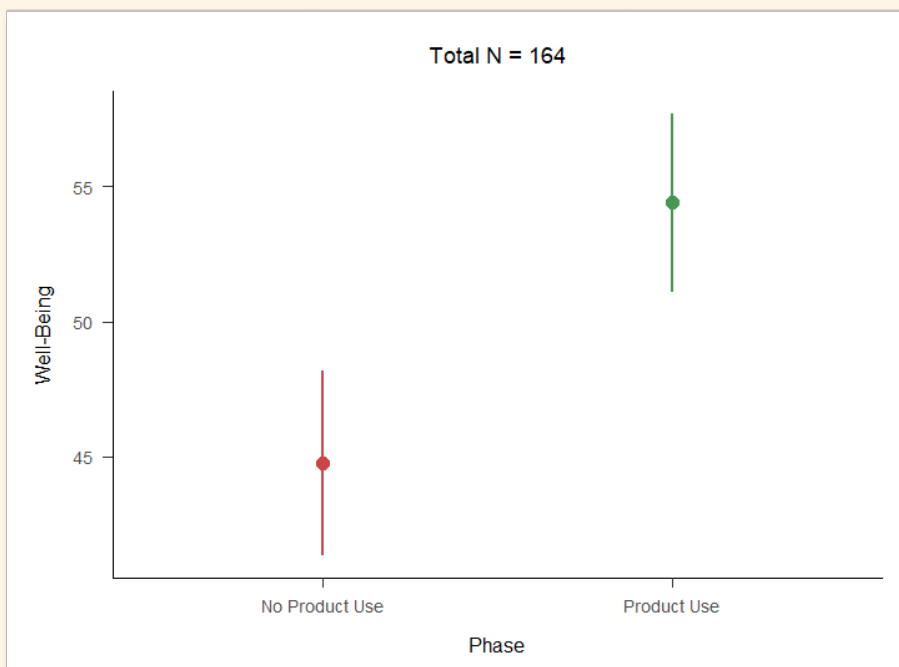
Category	Score
Good Well-Being	$> 50\%$
Poor Well-Being	$\leq 50\%$
Likely Depressed	$\leq 28\%$

- **Average Well-Being Score pre-product:** 44.78
- **Average Well-Being Score post-product:** 54.4
- **Change:** +9.62 points (+21.49%)

This result is meaningful in two ways:

1. Statistical significance of the model
2. Significance of the minimally important difference threshold

See the figure below for weekly WHO-5 trends.



The figure represents the average scores for the 'No Product Use' and 'Product Use' phases, controlling for the effects of time. Points represent the estimated mean for each phase and the vertical lines show the 95% confidence intervals.

In interaction models (N = 160), the analysis revealed that the effect of 'Phase' on 'Well-Being' was significantly moderated by Weight ($p < 0.05$). Other factors, including Gender, Dose, and Use Consistency, did not show a significant interaction ($p > 0.05$). Regarding Weight, the High Weight group (red line) started with the lowest Well-Being score. Over time, the groups converged, finishing at very similar levels.



Weekly Score for Sleep Disturbance

Was there a change in Sleep Disturbance scores?

Answer: Yes—Sleep Disturbance decreased significantly ($p < .05$) and in the expected positive direction.

Sleep Disturbance was assessed using the validated PROMIS Sleep Disturbance Short Form 8b, reported as standardized T-scores (50 = general population average; higher = worse sleep disturbance).

The following table shows the PROMIS Sleep Disturbance categories and their corresponding scores (based on T-scores).

Category	Score
None to slight	< 55
Mild	55-59.9
Moderate	60-69.9
Severe	> 70

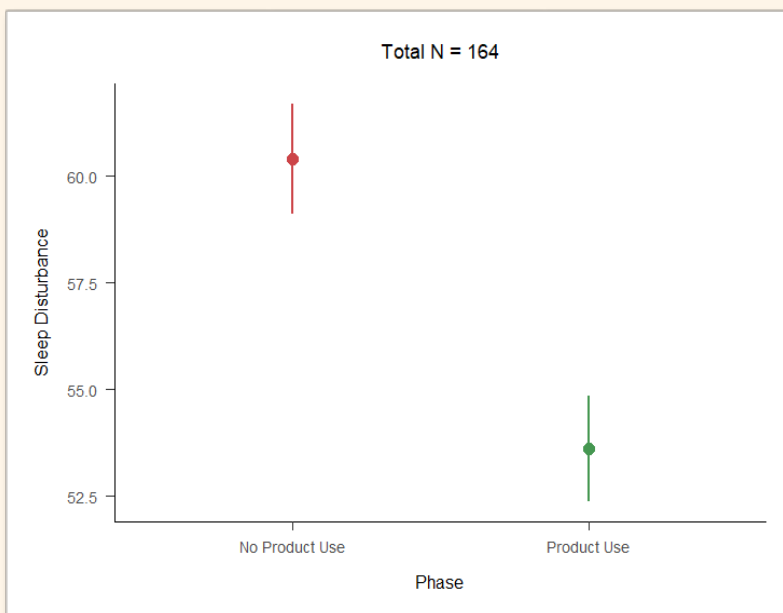
PROMIS threshold for minimally important difference is a 5 point difference.

- **Average PROMIS Score pre-product:** 60.4
- **Average PROMIS Score post-product:** 53.61
- **Change:** +6.8 points (-11.25%)

This result is meaningful in two ways:

1. Statistical significance of the model
2. Significance of the minimally important difference threshold

See the figure below for weekly Sleep Disturbance trends.



The figure represents the average scores for the 'No Product Use' and 'Product Use' phases, controlling for the effects of time. Points represent the estimated mean for each phase and the vertical lines show the 95% confidence intervals.

In interaction models (N = 160), the effect of 'Phase' was not significantly moderated by any of the tested factors, including Gender, Dose, Use Consistency, and Weight (all interaction $p > 0.05$). This is a positive finding, as it suggests that the product is equally effective across the categories tested.

Daily Feedback Pre vs During Sleep Product

Using your best estimate, how many hours did you sleep last night? (0 = Zero Hours; 10 = Ten or More Hours)

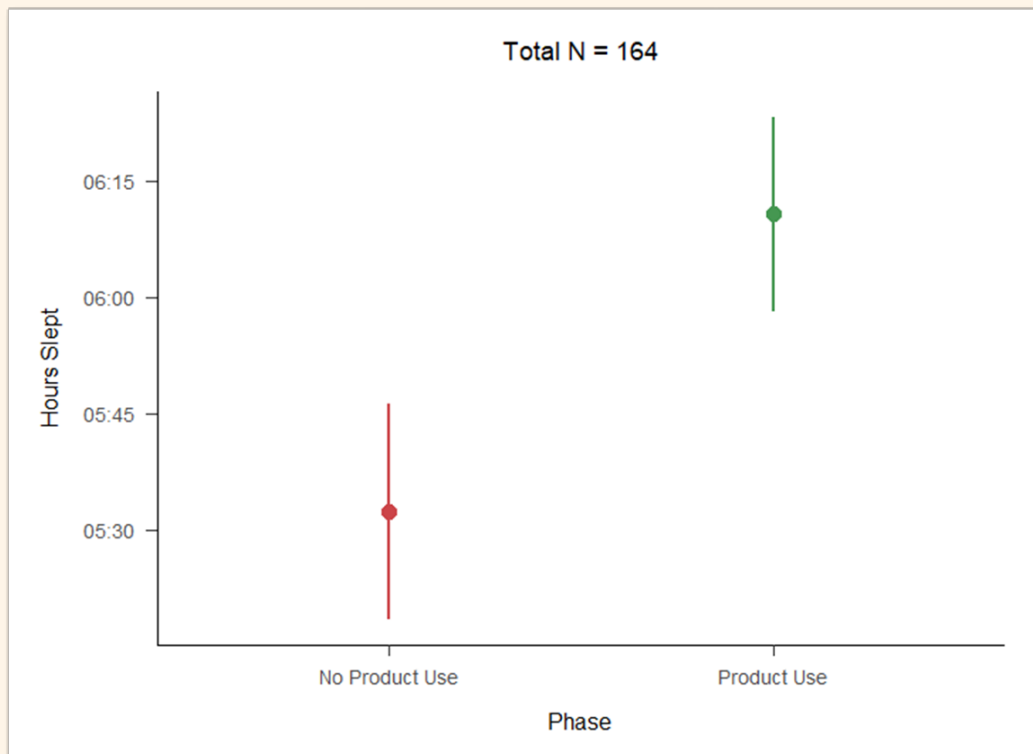
Was there a change in hours slept?

Answer: Yes, there was a statistically significant change in Hours Slept (p-value < .05). This change was in the expected positive direction.

The average hours slept without using the product: 05:33 (HH:mm)

The average hours slept when using the product: 06:11 (HH:mm)

This is an extra 00:38 minutes of hours slept (11.53 % change).



The figure shows the estimated average scores (points) and 95% confidence intervals (error bars) for the “No Product Use” (red) and “Product Use” (green) conditions, as predicted by the linear mixed-effects model.

How many hours of Deep Sleep does it say you had last night? (Only if participants report using any type of Sleep Tracker)

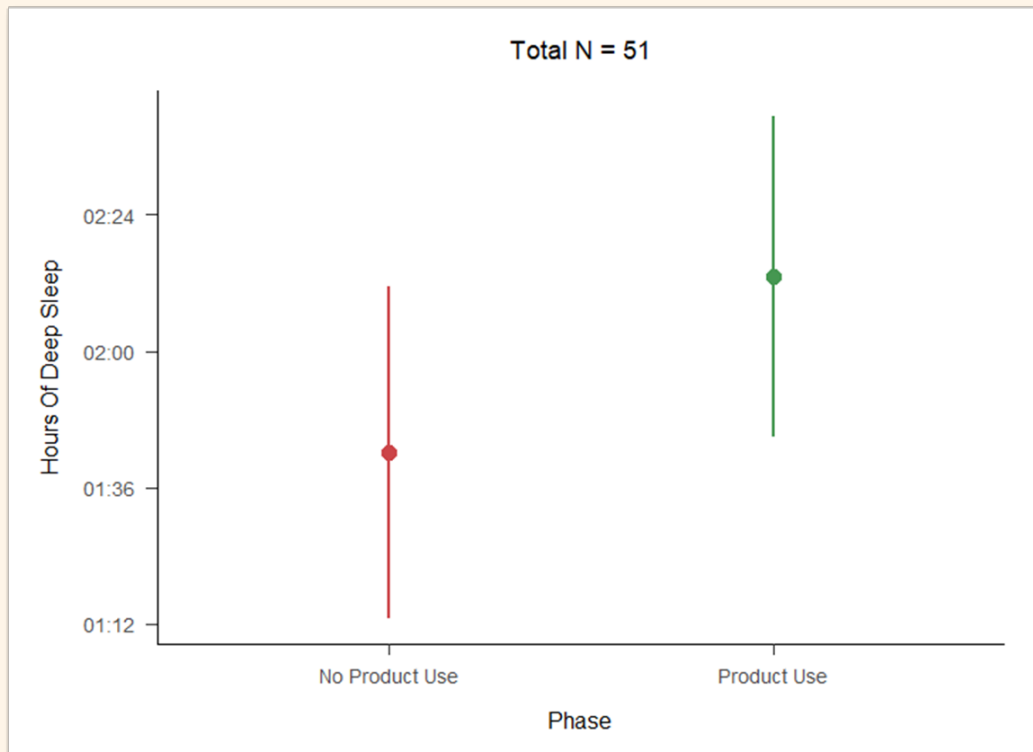
Was there a change in hours of Deep Sleep?

Answer: Yes, there was a statistically significant change in Hours Of Deep Sleep (p-value < .05). This change was in the expected positive direction.

The average hours of Deep Sleep without using the product: 01:42 (HH:mm)

The average hours of Deep Sleep when using the product: 02:13 (HH:mm)

This is an extra 00:31 minutes of hours of reported Deep Sleep (30.39 % change).



The figure shows the estimated average scores (points) and 95% confidence intervals (error bars) for the “No Product Use” (red) and “Product Use” (green) conditions, as predicted by the linear mixed-effects model.

Which statement best describes your ability to initially fall asleep last night?

Was there a change in ability to initially fall asleep?

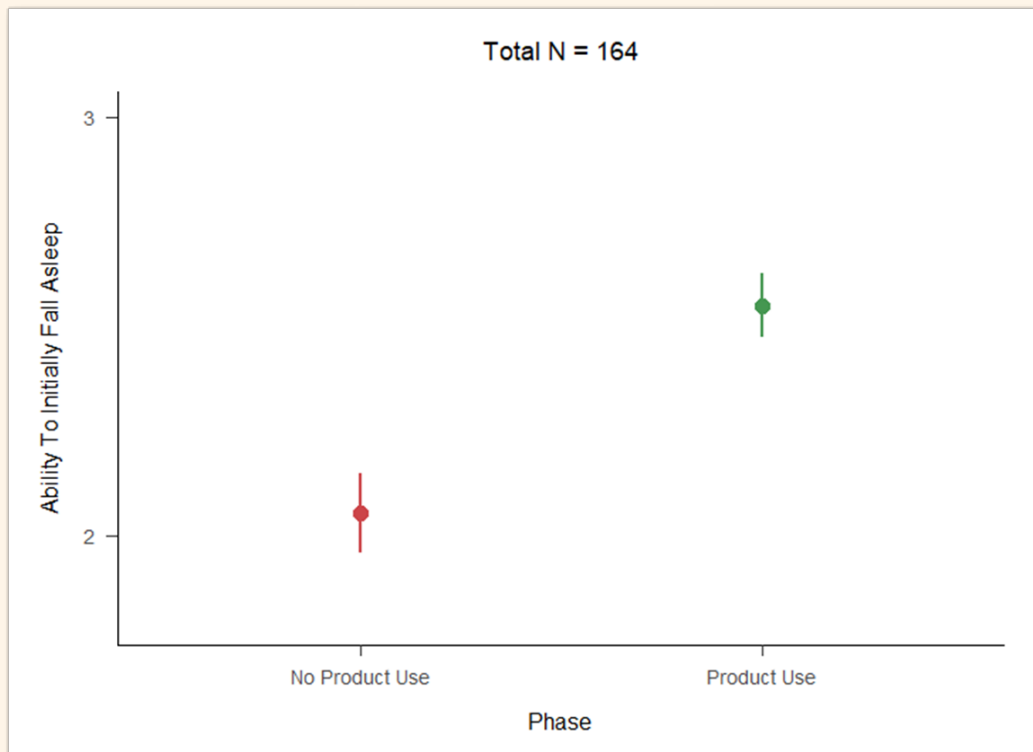
Answer: Yes, there was a statistically significant change in Ability To Initially Fall Asleep (p -value $< .05$). This change was in the expected positive direction.

Note: Scores on this measure are 1 = "Much harder" to 4 = "Much easier than usual" (higher scores are better)

The average ability to initially fall asleep without using the product: 2.07

The average ability to initially fall asleep when using the product: 2.57

This is 0.5 point increase in ability to initially fall asleep (24.06% change).



The figure shows the estimated average scores (points) and 95% confidence intervals (error bars) for the "No Product Use" (red) and "Product Use" (green) conditions, as predicted by the linear mixed-effects model.

How satisfied were you with your ability to stay asleep?

Was there a change in the ability to stay asleep?

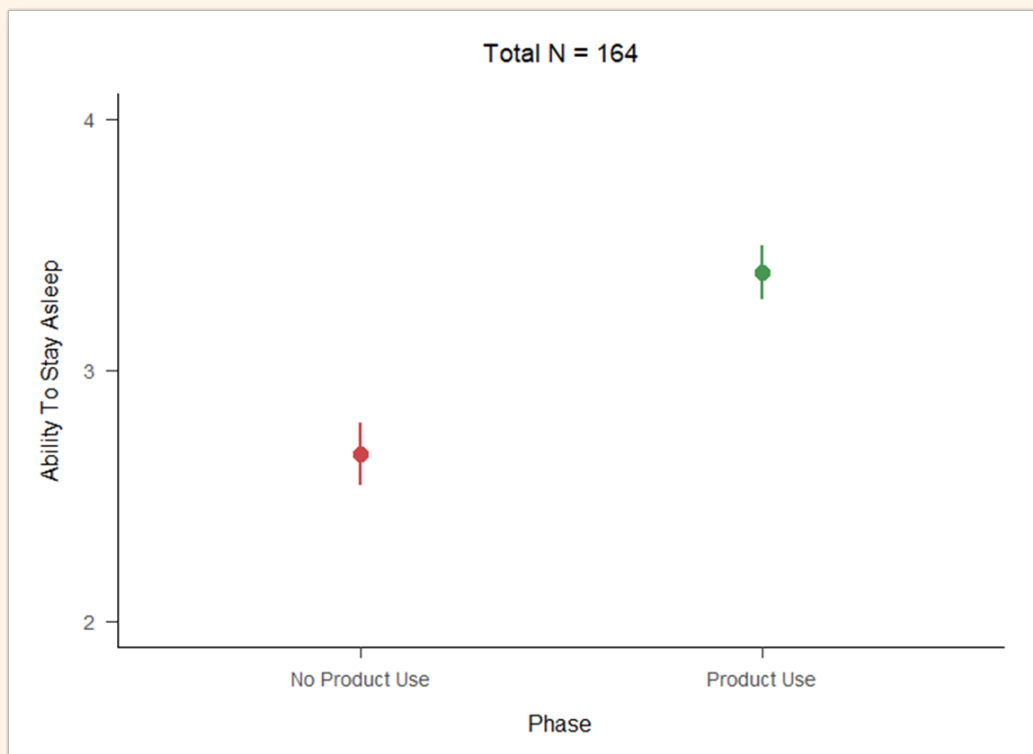
Answer: Yes, there was a statistically significant change in Ability To Stay Asleep (p-value < .05). This change was in the expected positive direction.

Note: Scores on this measure are 1 = “Very Dissatisfied” to 5 = “Very Satisfied” (higher scores are better)

The average ability to stay asleep without using the product: 2.72

The average ability to stay asleep when using the product: 3.44

This is 0.73 point increase in ability to stay asleep (26.73 % change).



The figure shows the estimated average scores (points) and 95% confidence intervals (error bars) for the “No Product Use” (red) and “Product Use” (green) conditions, as predicted by the linear mixed-effects model.

How would you rate your sleep quality?

Was there a change in sleep quality?

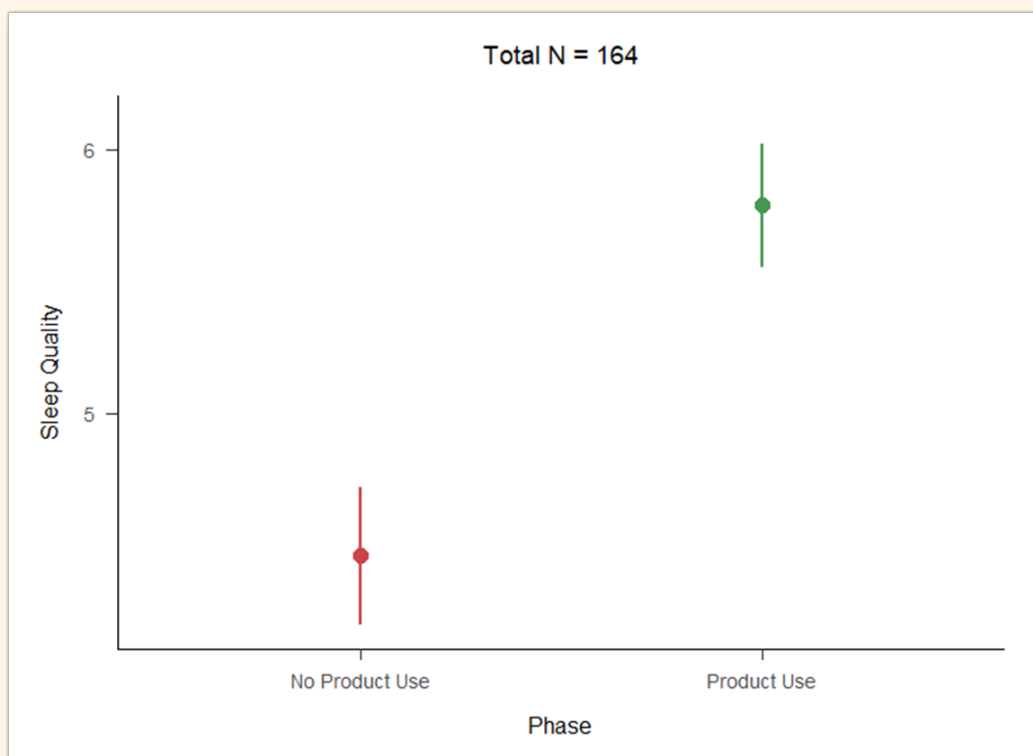
Answer: Yes, there was a statistically significant change in Sleep Quality (p-value < .05). This change was in the expected positive direction.

Note: Scores range from 0 (worst) to 10 (best).

The average sleep quality without using the product: 4.5

The average sleep quality when using the product: 5.83

This is 1.33 point increase in sleep quality (29.57% change).



The figure shows the estimated average scores (points) and 95% confidence intervals (error bars) for the “No Product Use” (red) and “Product Use” (green) conditions, as predicted by the linear mixed-effects model.

Did you wake up during the night last night?

Was there a change in waking up?

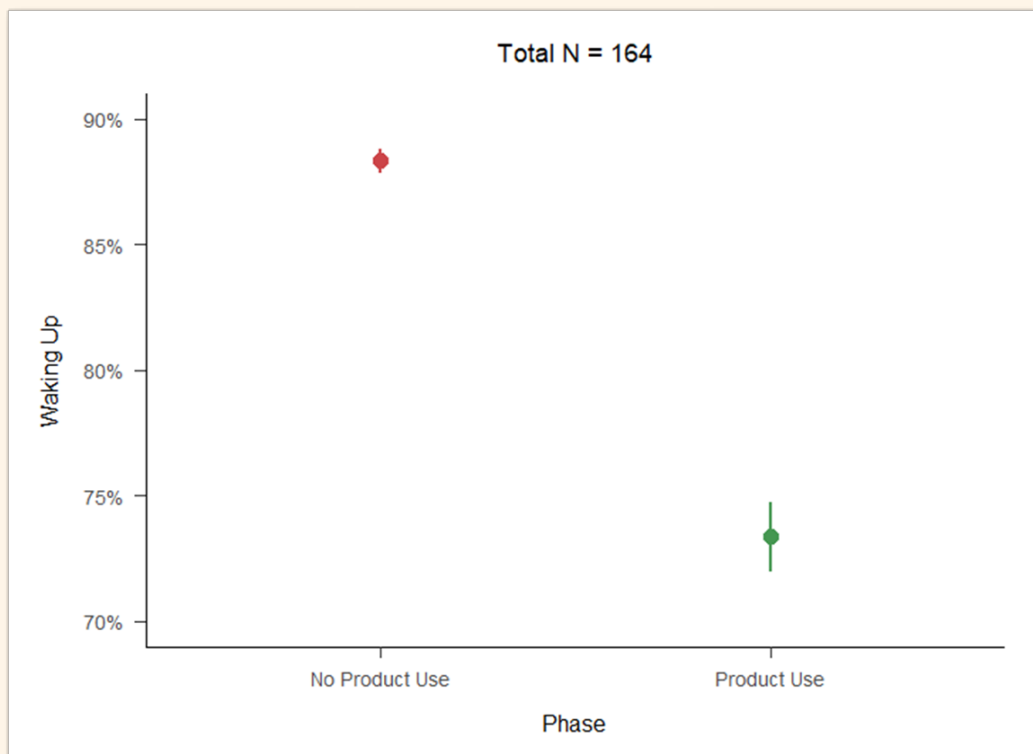
Answer: Yes, there was a statistically significant change in the odds of waking up (p -value < .05). This change was in the expected direction.

Note that scores on the measure are: No/ Yes

The average probability of waking up without using the product: 88.35%.

The average probability of waking up when using the product: 73.37%.

This is a -14.98 percentage-point decrease in probability of waking up (-16.95% change).



The figure shows the estimated average scores (points) and 95% confidence intervals (error bars) for the “No Product Use” (red) and “Product Use” (green) conditions, as predicted by the linear mixed-effects model.

How many times did you wake up during the night?

Was there a change in times waking up?

Answer: Yes, there was a statistically significant change in Times Waking Up (p -value < .05). This change was in the expected positive direction.

The average times waking up without using the product: 2.78

The average times waking up when using the product: 2.18

This is a reduction of -0.6 of times waking up (-21.59% change).



The figure shows the estimated average scores (points) and 95% confidence intervals (error bars) for the “No Product Use” (red) and “Product Use” (green) conditions, as predicted by the linear mixed-effects model.

Ability to fall back asleep upon waking up

Was there a change in ability to fall back asleep?

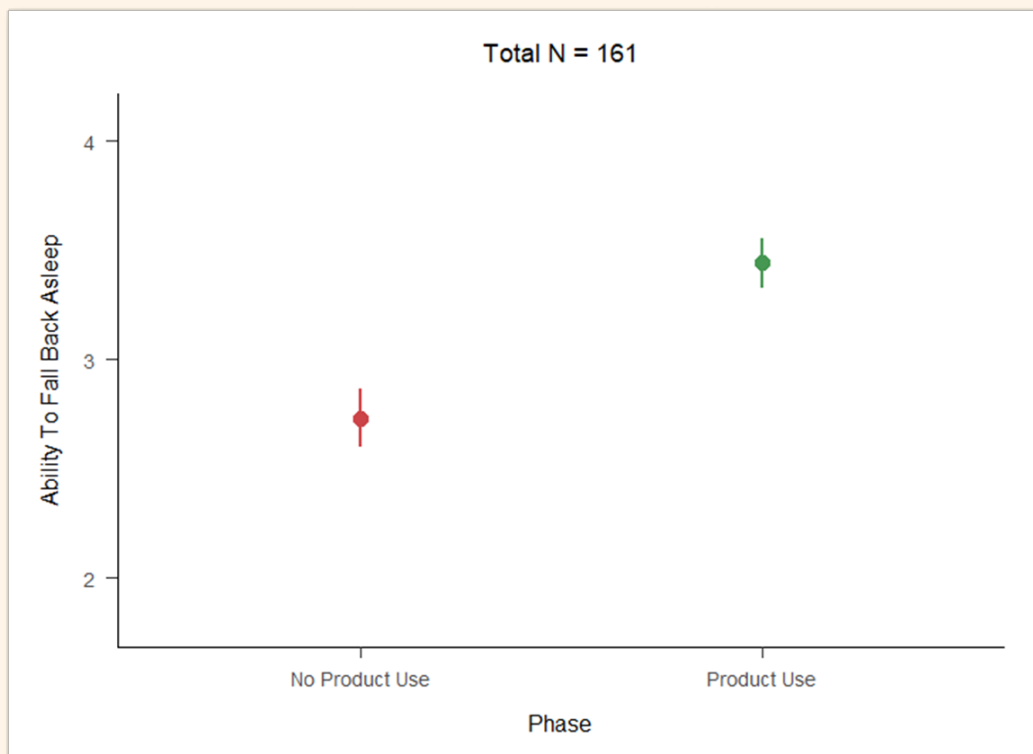
Answer: Yes, there was a statistically significant change in Ability To Fall Back Asleep (p-value < .05). This change was in the expected positive direction.

Note: Scores range from 1 (Much harder time) to 6 (Not wake up unexpectedly).

The average ability to fall back asleep without using the product: 2.71

The average ability to fall back asleep when using the product: 3.42

This is a 0.71 point increase in ability to fall back asleep (26.21 % change).



The figure shows the estimated average scores (points) and 95% confidence intervals (error bars) for the “No Product Use” (red) and “Product Use” (green) conditions, as predicted by the linear mixed-effects model.

Do you feel refreshed after last night's sleep?

Was there a change in feeling refreshed?

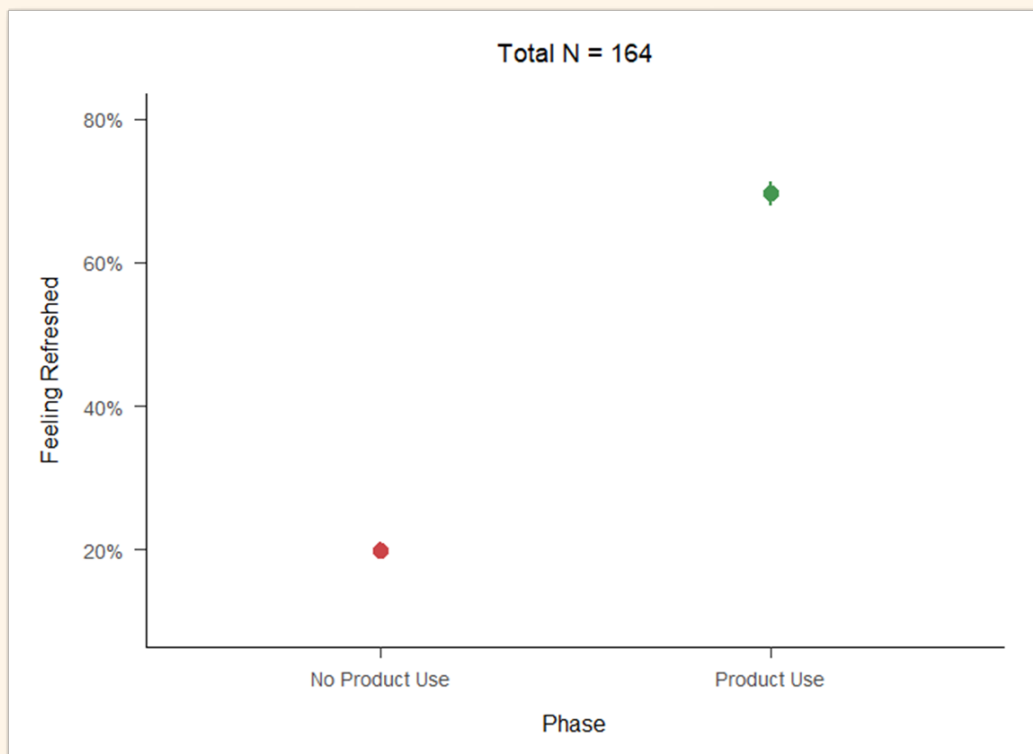
Answer: Yes, there was a statistically significant change in the odds of feeling refreshed (p -value $< .05$). This change was in the expected direction.

Note that scores on the measure are: No/Yes

The average probability of feeling refreshed without using the product: 19.95%.

The average probability of feeling refreshed when using the product: 69.61%.

This is a 49.66 percentage-point increase in probability of feeling refreshed (248.91% change).



The figure shows the estimated average scores (points) and 95% confidence intervals (error bars) for the “No Product Use” (red) and “Product Use” (green) conditions, as predicted by the linear mixed-effects model.

What best describes your mood this morning?

Was there a change in morning mood?

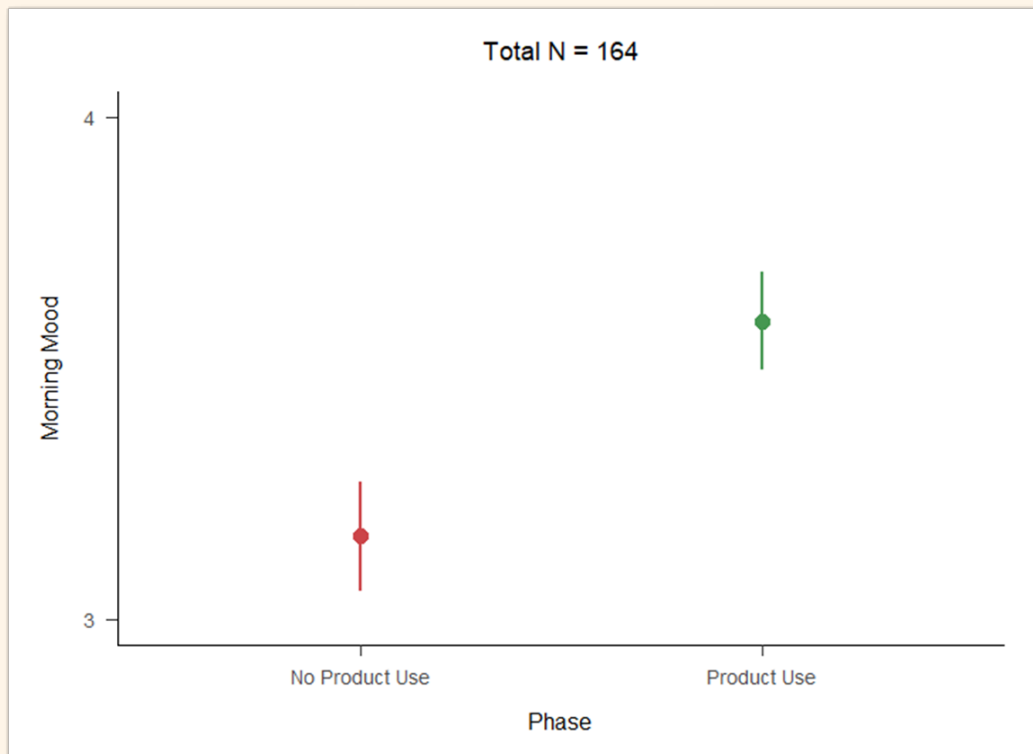
Answer: Yes, there was a statistically significant change in Morning Mood (p -value < .05). This change was in the expected positive direction.

Note: Scores range from 1 (Bad) to 5 (Great).

The average morning mood without using the product: 3.2

The average morning mood when using the product: 3.63

This is a 0.43 point increase in morning mood (13.39% change).



The figure shows the estimated average scores (points) and 95% confidence intervals (error bars) for the “No Product Use” (red) and “Product Use” (green) conditions, as predicted by the linear mixed-effects model.

What best describes your mood yesterday?

Was there a change in yesterday mood?

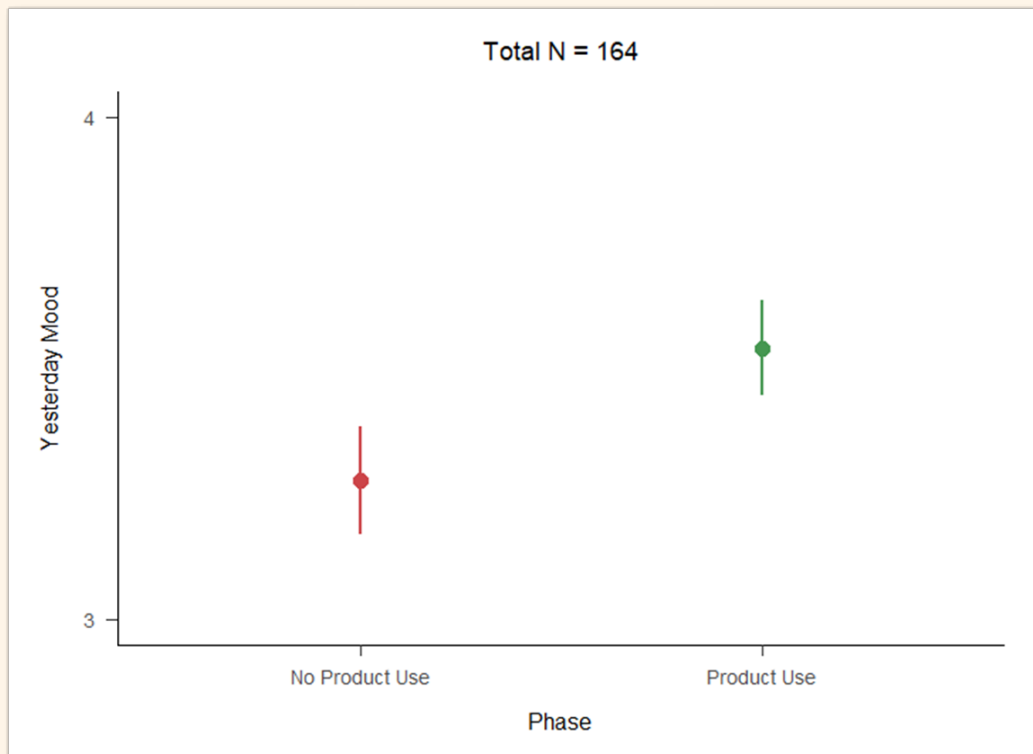
Answer: Yes, there was a statistically significant change in Yesterday Mood (p -value $< .05$). This change was in the expected positive direction.

Note: Scores range from 1 (Bad) to 5 (Great).

The average yesterday mood without using the product: 3.32

The average yesterday mood when using the product: 3.59

This is a 0.26 point increase in yesterday mood (7.95 % change).



The figure shows the estimated average scores (points) and 95% confidence intervals (error bars) for the “No Product Use” (red) and “Product Use” (green) conditions, as predicted by the linear mixed-effects model.

Do you feel like you were productive yesterday?

Was there a change in productivity?

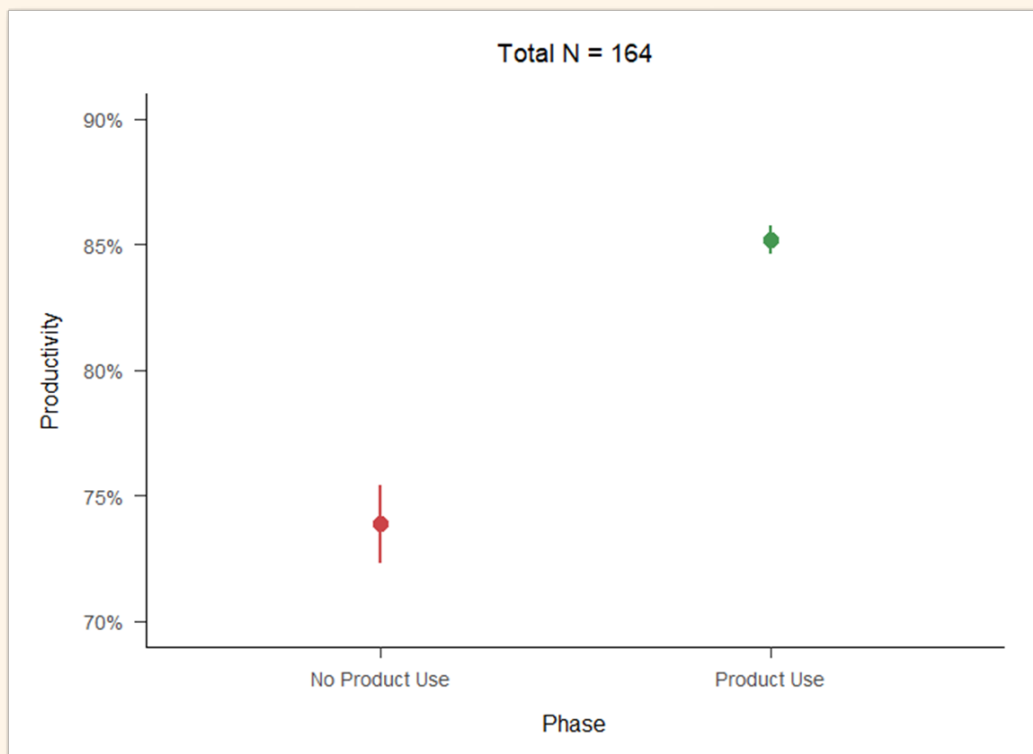
Answer: Yes, there was a statistically significant change in the odds of productivity (p-value < .05). This change was in the expected direction.

Note that scores on the measure are: No/ Yes

The average probability of productivity without using the product: 73.9%.

The average probability of productivity when using the product: 85.21%.

This is a 11.31 percentage-point increase in probability of productivity (15.31% change).



The figure shows the estimated average scores (points) and 95% confidence intervals (error bars) for the “No Product Use” (red) and “Product Use” (green) conditions, as predicted by the linear mixed-effects model.

Per your best estimate, how many hours were you productive yesterday?

Was there a change in productivity hours?

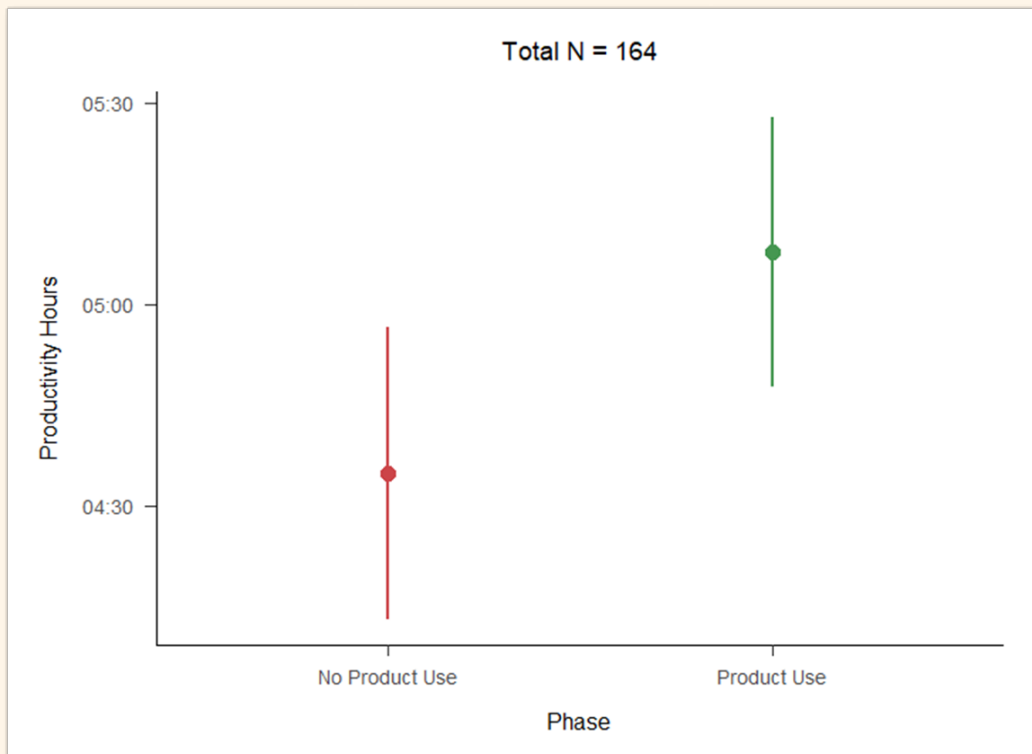
Answer: Yes, there was a statistically significant change in Productivity Hours (p-value < .05). This change was in the expected positive direction.

Note: Scores range from 0 (worst) to 10 (best).

The average productivity hours without using the product: 04:37 (HH:mm)

The average productivity hours when using the product: 05:10 (HH:mm)

This is an extra 00:32 minutes of productivity hours (11.86% change).



The figure shows the estimated average scores (points) and 95% confidence intervals (error bars) for the “No Product Use” (red) and “Product Use” (green) conditions, as predicted by the linear mixed-effects model.

How would you rate your overall day yesterday?

Was there a change in rating of overall day?

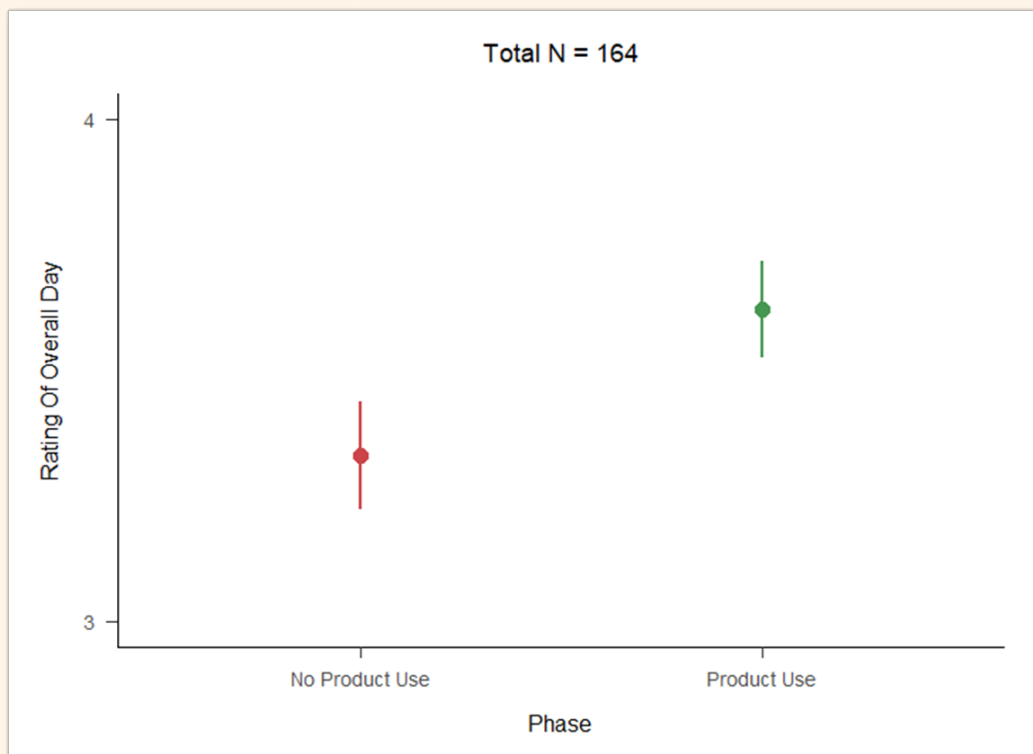
Answer: Yes, there was a statistically significant change in Rating Of Overall Day (p-value < .05). This change was in the expected positive direction.

Note: Scores range from 1 (worst) to 5 (best).

The average rating of overall day without using the product: 3.36

The average rating of overall day when using the product: 3.65

This is a 0.29 point increase rating of rating of overall day (8.68% change).



The figure shows the estimated average scores (points) and 95% confidence intervals (error bars) for the “No Product Use” (red) and “Product Use” (green) conditions, as predicted by the linear mixed-effects model.

Did you take any additional medicines, products, supplements, or therapies?

Was there a change in using other sleep aids?

Answer: No, there was not a statistically significant change in the odds of using other sleep aids (p-value > .05).

List of other reported medications

Response	Other reported medications
1	Relax Unwind Viva Zen Kava Shot
2	N/A
3	Magnesium glycinate
4	Tylenol
5	Naproxen sodium, tylenol
6	Naproxen, acetaminophen
7	Acetaminophen
8	Advil, Tylenol
9	Tylenol, Aleve
10	Aleve
11	Nothing, I accidentally hit the wrong button
12	Protab Recover
13	Tylenol and protab recover
14	Protab Recover and tylenol
15	tylenol
16	THC 25 mg oral tablet
17	THC 25 mg tab
18	THC tablet 25 mg
19	Thc 25 mg tab
20	Thc 25 mg
21	Thc tab 25 mg
22	Diphenhydramine
23	Trazadone
24	CBDA
25	Cbd
26	Protab Relief
27	Protab relief
28	Advil
29	Progesterone
30	sleeping pill
31	Venlafaxine
32	Iron, b12
33	Sleep aid
34	Prazocin, hydroxyzine, fluoxetine, aripiprazole
35	Prazocin, aripiprazole, fluoxetine, hydroxyzine
36	Prazocin, hydroxyzine, aripiprazole, fluoxetine
37	Fluoxetine, prozocin, aripiprazole, hydroxyzine
38	Fluoxetine, aripiprazole, hydroxyzine, Prazocin
39	Prazocin, fluoxetine, hydroxyzine, aripiprazole

Response	Other reported medications
40	Aripiprazole, fluoxetine, hydroxyzine, Prazocin
41	Fluoxetine aripiprazole hydroxyzine Prazocin
42	Herbal tea
43	Melatonin
44	Ibuprophen
45	Alcohol, ibuprofen
46	Ibuprofen
47	Ibuprofen, magnesium
48	Cold pill
49	Heat, ibuprofen
50	None
51	N/a
52	Norco
53	Lemon balm
54	Red light therapy
55	Antibiotics
56	Cannabis
57	Zoloft
58	zoloft
59	Magnesium Glycinate
60	Willies drink
61	Dry flower vaped cannabis
62	Dry flower vaped cannabis, cannabis oil
63	Two drinks
64	One drink
65	Gabapentin, addyi, folic acid, & vitamin c
66	Tylenol PM
67	Tylenol pm
68	Sleep Aid & Tylenol PM
69	Tylenol PM, Benadryl
70	Benadryl, Zyrtec
71	Zyrtec, Gabapentin, Famotidine, Hydrochlorothiazide, Ondasetron
72	Gabapentin, Hydrochlorothiazide, Ondasetron, Famotidine, Zyrtec
73	Gabapentin, Zyrtec, Hydrochlorathiazide.
74	Gabapentin, Hydrochlorathiazide, Ondasteron
75	Zyrtec, Benadryl
76	Gabapentin.,olmesartan , Hydrochlorathiazide.
77	I got a massage during the day.
78	Private
79	Cough and cold med
80	Cough medicine

Response	Other reported medications
81	Cyclobezepine (muscle relaxer for neck pain)
82	soft gel
83	Gummy
84	I had a THC Seltzer with 5MG
85	tylenol arthritis
86	Ashwaganda, gaba , saffron
87	Aripiprazole, fluoxetine, hydroxyzine, Prazocin
88	Fluoxetine aripiprazole hydroxyzine Prazocin
89	Herbal tea
90	Melatonin
91	Ibuprophen
92	Alcohol, ibuprofen
93	Ibuprofen
94	Ibuprofen, magnesium
95	Cold pill
96	Heat, ibuprofen
97	None
98	N/a
99	Norco
100	Lemon balm
101	Red light therapy
102	Antibiotics
103	Cannabis
104	Zoloft
105	zoloft
106	Magnesium Glycinate
107	Willies drink
108	Dry flower vaped cannabis
109	Dry flower vaped cannabis, cannabis oil
110	Two drinks
111	One drink
112	Gabapentin, addyi, folic acid, & vitamin c
113	Tylenol PM
114	Tylenol pm
115	Sleep Aid & Tylenol PM
116	Tylenol PM, Benadryl
117	Benadryl, Zyrtec
118	Zyrtec, Gabapentin, Famotidine, Hydrochlorothiazide, Ondasetron
119	Gabapentin, Hydrochlorothiazide, Ondasetron, Famotidine, Zyrtec
120	Gabapentin, Zyrtec, Hydrochlorathiazide.
121	Gabapentin, Hydrochlorathiazide, Ondasteron
122	Zyrtec, Benadryl
123	Gabapentin.,olmesartan , Hydrochlorathiazide.
124	I got a massage during the day.
125	Private
126	Cough and cold med
127	Cough medicine
128	Cyclobezepine (muscle relaxer for neck pain)
129	soft gel
130	Gummy

Response	Other reported medications
131	I had a THC Seltzer with 5MG
132	tylenol arthritis
133	Ashwaganda, gaba , saffron
134	Ashwaganda, saffron
135	Ashwaganda, saffron,
136	Magnesium glycinate, collagen
137	Benadryl
138	Cough syrup and cold medication
139	Cough Syrup and store brand cold & flu medicine
140	Cough syrup and cold medicine
141	Cough syrup and cold medicine (OTC)
142	Magnesium
143	Hydrocodone
144	MAGNESIUM PILL
145	motrin
146	Ibuproo
147	THC edible
148	50 mg of edibles
149	Thc
150	Magnesium/ashwaganda gummy
151	Magenseium/ashwaganda gummy
152	Magnesium/asheaganda gummy
153	Magnesium/ashwaganda gummy
154	Magnesium ashwaganda gummy
155	Magnesium adhwaganda gummy
156	Alleve
157	Flexaral
158	CBD gummy
159	CBD gummies
160	No medication, THc seltzer
161	Benadryl and ibuprofen
162	Ibuprofen 800 milligrams
163	Vitamin C and Zinc
164	Benicar
165	THC 5mg Tincture 1/2 Doppler
166	THC tincture
167	THC Tincture
168	Excedrin
169	Magnesium supplements. Cbd topical
170	Magnesium supplements.
171	Magnesium supplements
172	Pentazosine /naloxone, cyclobenzaprine, celoxib
173	Pentazocine/Naloxone, cyclobenzaprine, celoxib
174	Clear Minds hypnotherapy
175	Seroquel
176	Suboxone
177	Indomethacin
178	Indomethacin
179	Magnesium, reishi mushroom extract
180	Reishi mushroom extract, magnesium
181	Reishi extract, magnesium
182	Ibuprofen (one)
183	Reishi, magnesium
184	Magnesium, reishi extract
185	Magnesium, Reishi

Response	Other reported medications
186	Magnesium, reishi
187	Magnesium, Reishi, ibuprofen
188	nyquill and antibiotics
189	Ashwaganda extract
190	Ashwaganda
200	Tincture
201	Tylenol and Naproxen
202	Dayquil for a cold
203	Dayquil
204	Cold medicine
205	Dayquil, Tylenol
206	Tylenol, meloxicam, Naproxen
207	Glycine, magnesium
208	Tea

ANXIETY & SLEEP

Did Anxiety affect your sleep last night?

Was there a change in anxiety impacting sleep?

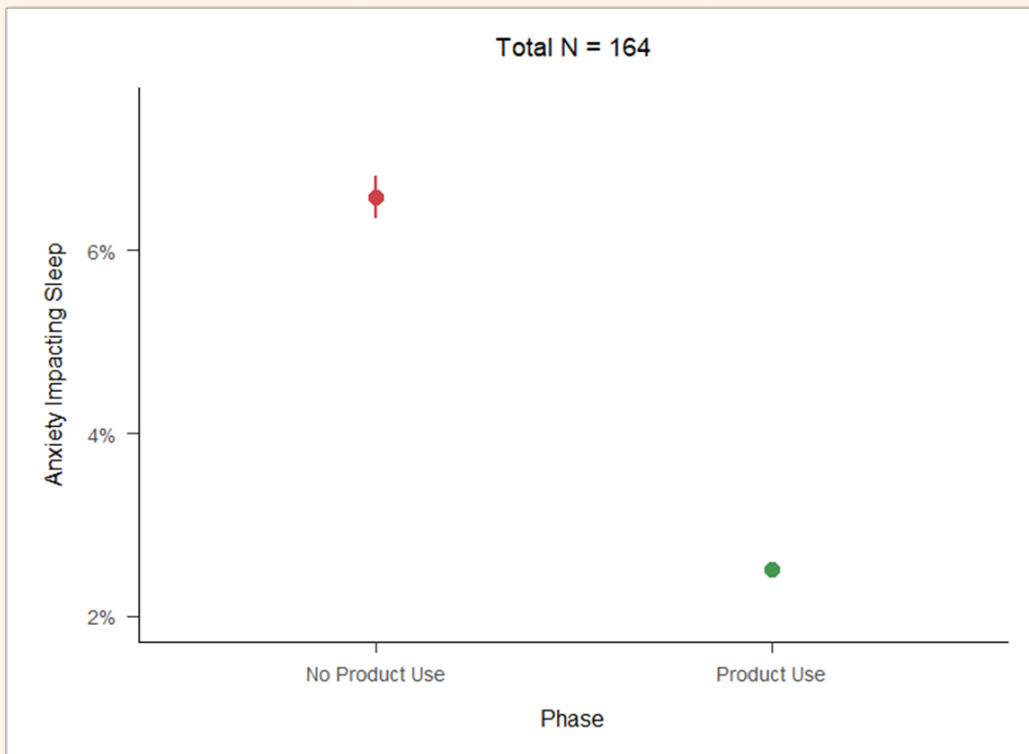
Answer: Yes, there was a statistically significant change in the odds of anxiety impacting sleep (p -value < .05). This change was in the expected direction.

Note that scores on the measure are: No/Yes

The average probability of anxiety impacting sleep without using the product: 6.58%.

The average probability of anxiety impacting sleep when using the product: 2.51%.

This is a -4.07 percentage-point decrease in probability of anxiety impacting sleep (-61.83% change).



The figure represents the average scores for the 'No Product Use' and 'Product Use' phases, controlling for the effects of time. Points represent the estimated mean for each phase and the vertical lines show the 95% confidence intervals.

Temporary Anxiety Level Before and After Taking the Product

Was there a change in anxiety level?

Answer: Yes, there was a statistically significant change in Anxiety Level ($p\text{-value} < .05$). This change was in the expected positive direction.

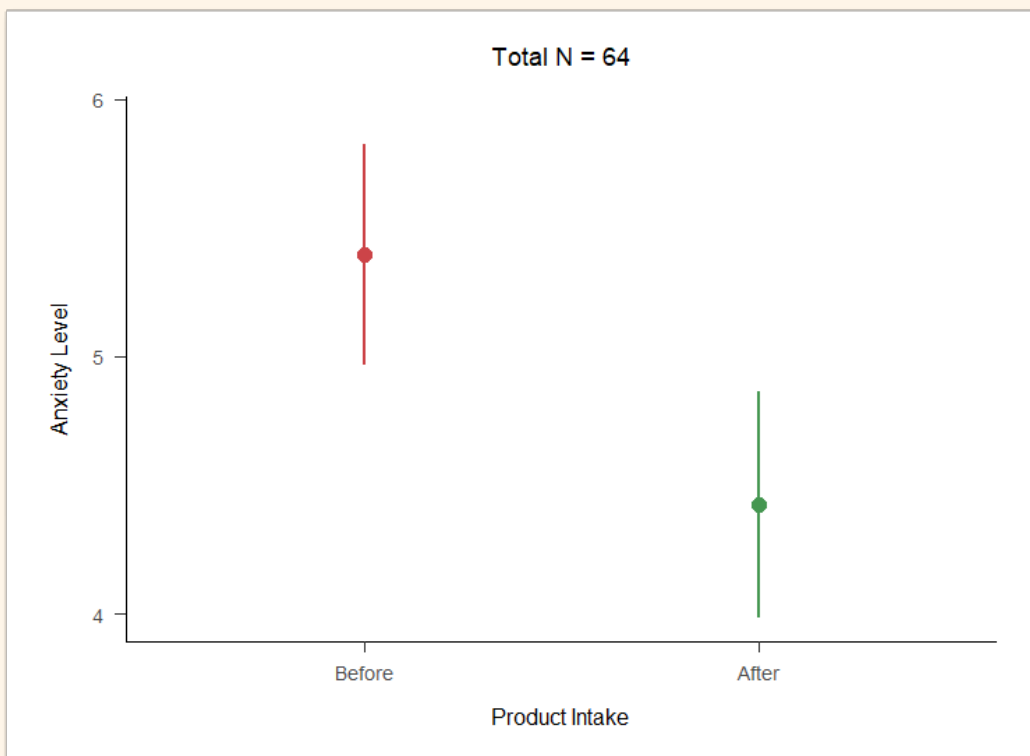
Note: Scores range from 0 (No anxiety) to 10 (Most severe anxiety).

The average anxiety level before taking the product: 5.37

The average anxiety level after taking the product: 4.4

This is a reduction of -0.97 of anxiety level (-18.05% change).

See the Figure below for a visual display of Anxiety Level scores per day.



Temporary Anxiety Severity during the Study Phase without the Product, and during the Product-Use Phase before Product Intake.

Was there a change in anxiety severity?

Answer: No, there was not a statistically significant change in Anxiety Severity ($p\text{-value} > .05$).

PAIN & SLEEP

Did Pain affect your sleep last night?

Was there a change in pain impacting sleep?

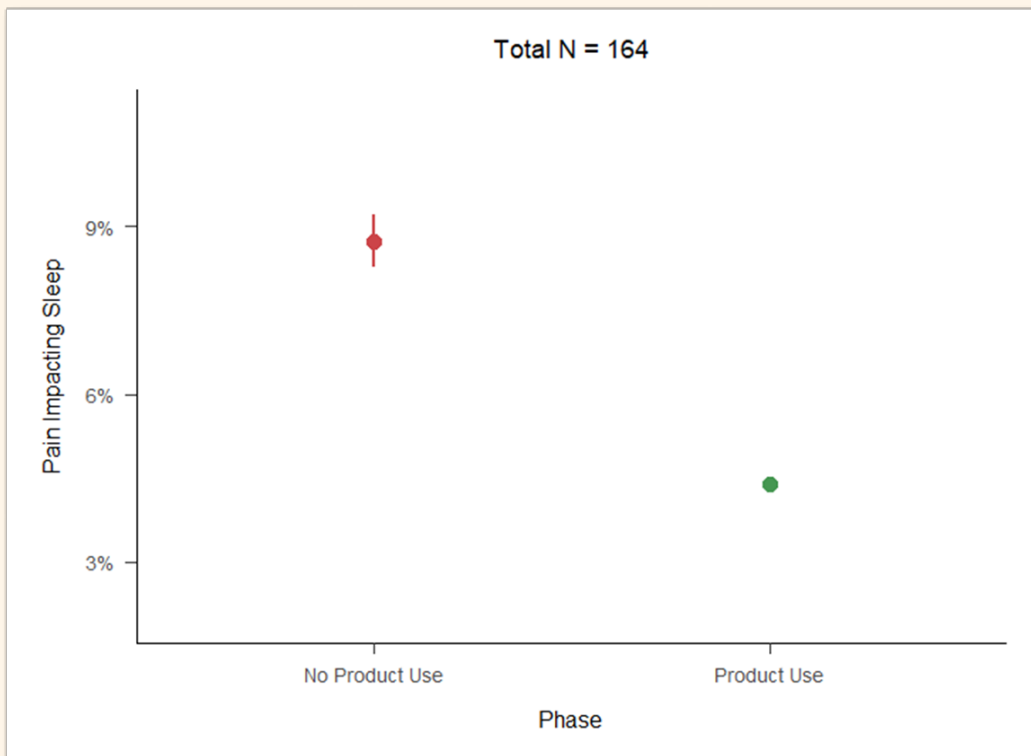
Answer: Yes, there was a statistically significant change in the odds of pain impacting sleep (p -value < .05). This change was in the expected direction.

Note that scores on the measure are: No/Yes

The average probability of pain impacting sleep without using the product: 8.72%.

The average probability of pain impacting sleep when using the product: 4.4%.

This is a -4.33 percentage-point decrease in probability of pain impacting sleep (-49.59% change).



The figure represents the average scores for the 'No Product Use' and 'Product Use' phases, controlling for the effects of time. Points represent the estimated mean for each phase and the vertical lines show the 95% confidence intervals.

Temporary Pain Level Before and After Taking the Product during the Product-Use Phase

Was there a change in pain level?

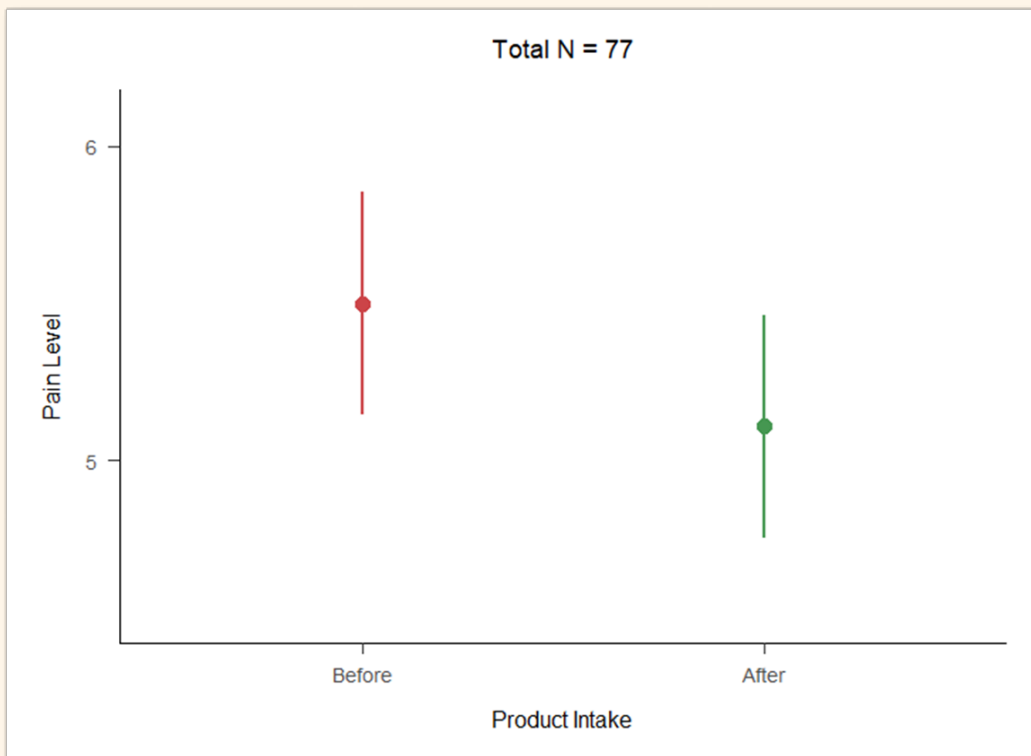
Answer: Yes, there was a statistically significant change in Pain Level (p -value < .05). This change was in the expected positive direction.

Note: Scores range from 0 (No pain) to 10 (Most severe pain).

The average pain level without using the product: 5.39

The average pain level when using the product: 4.32

This is a reduction of -1.07 (-19.88% change).



The figure shows the estimated average scores (points) and 95% confidence intervals (error bars) for the “No Product Use” (red) and “Product Use” (green) conditions, as predicted by the linear mixed-effects model.

Temporary Pain Severity during the Study Phase without the Product, and during the Product-Use Phase before Product Intake.

Was there a change in pain severity?

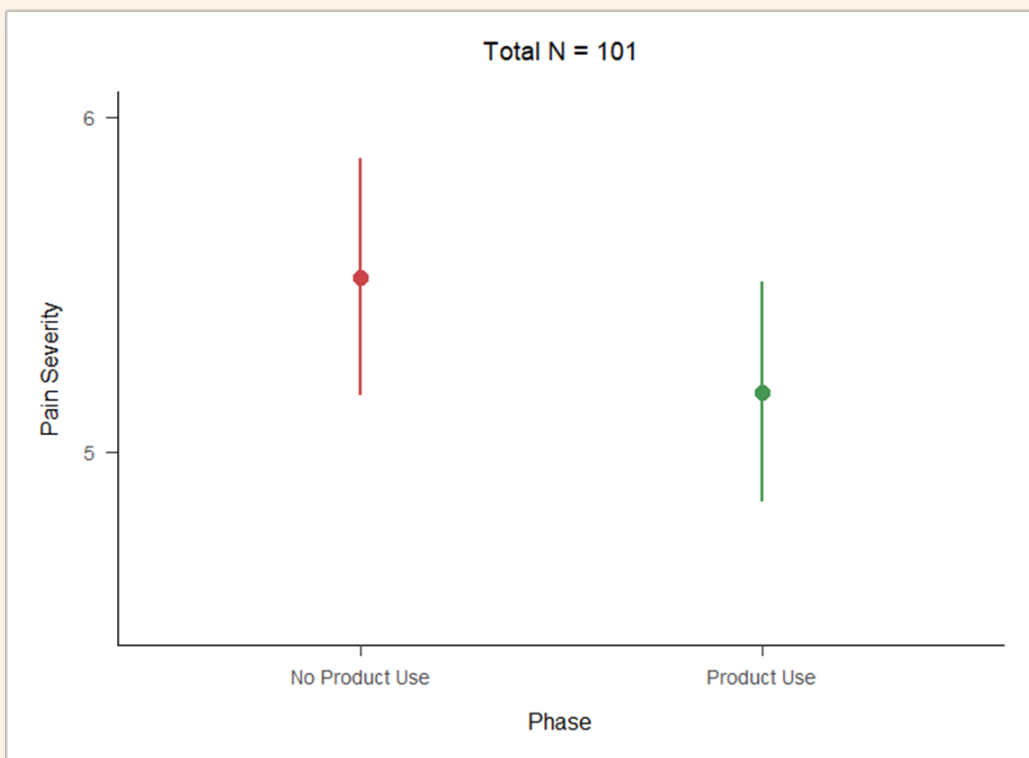
Answer: Yes, there was a statistically significant change in Pain Severity (p -value < .05). This change was in the expected positive direction.

Note: Scores range from 0 (No pain) to 10 (Most severe pain).

The average pain severity in pre product use phase: 5.58

The average pain severity in product use phase, but pre product consumption: 5.23

This is a reduction of -0.34 (-6.17% change).



The figure shows the estimated average scores (points) and 95% confidence intervals (error bars) for the “No Product Use” (red) and “Product Use” (green) conditions, as predicted by the linear mixed-effects

OTHER CANNABIS USE

Did you use/consume any other type of cannabis, or cannabinoid based product(s) yesterday?

Was there a change in other cannabis product consumption?

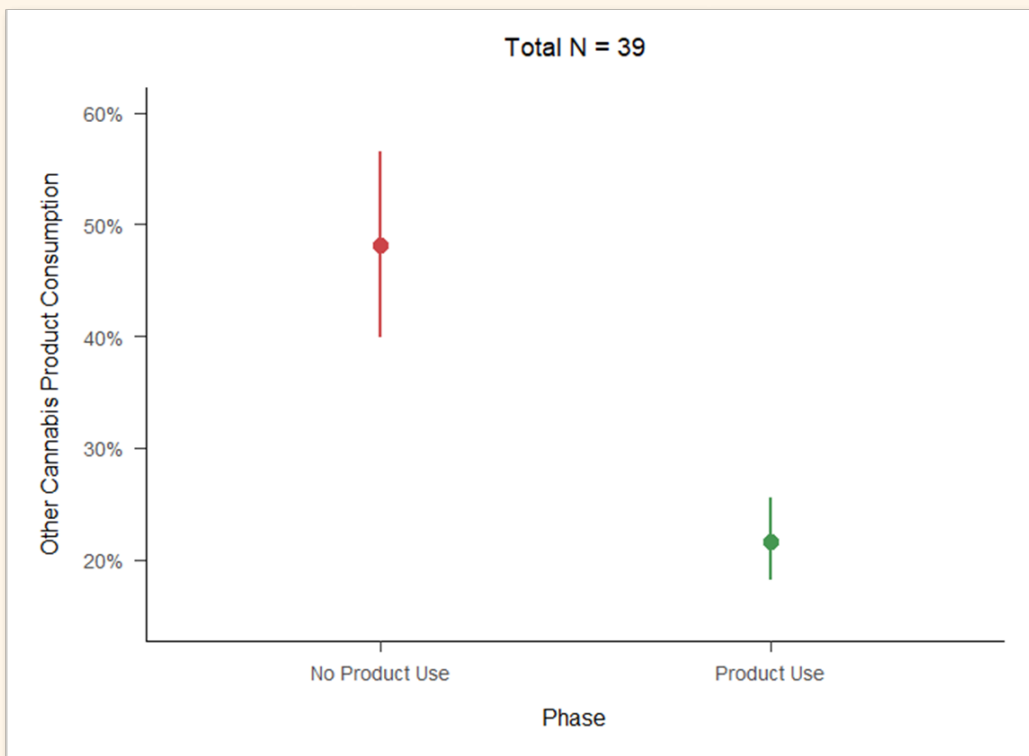
Answer: Yes, there was a statistically significant change in the odds of other cannabis product consumption (p -value < .05). This change was in the expected direction.

Note that scores on the measure are: No/Yes

The average probability of other cannabis product consumption without using the product: 48.21%.

The average probability of other cannabis product consumption when using the product: 21.61%.

This is a -26.59 percentage-point decrease in probability of other cannabis product consumption (-55.16% change).



The figure represents the probability of reporting other cannabis product consumption, controlling for the effects of time. Points represent the estimated means and the vertical lines show the 95% confidence intervals.

On days the product was used, what other type of product(s) did you use/consume?

Answers	Total N (%)
Beverages	23 (12.6%)
Cartridges	26 (14.3%)
Concentrates	15 (8.2%)
Edibles	35 (19.2%)
Flower	77 (42.3%)
Pills/capsules	3 (1.6%)
Tinctures	2 (1.1%)
Topicals	1 (0.5%)

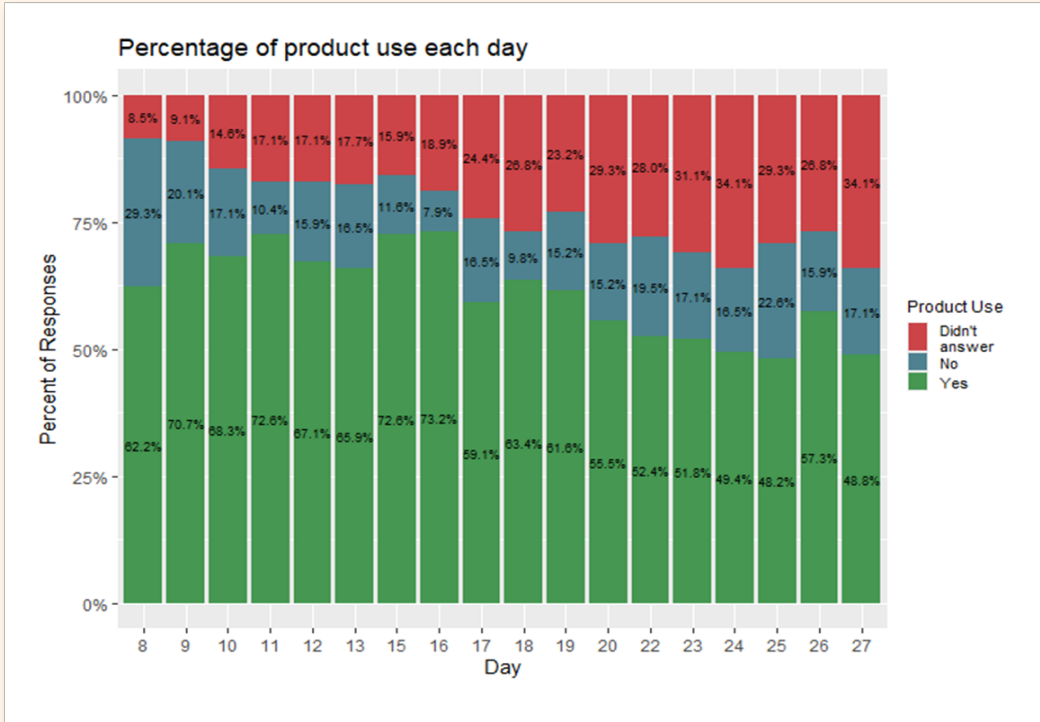
On days the product was used, What time(s) did you use/consume other cannabis product(s)?

Answers	Total N (%)
Before noon	22 (9.5%)
12pm - 5pm	53 (22.8%)
5pm - 8pm	93 (40.1%)
8pm - midnight	64 (27.6%)

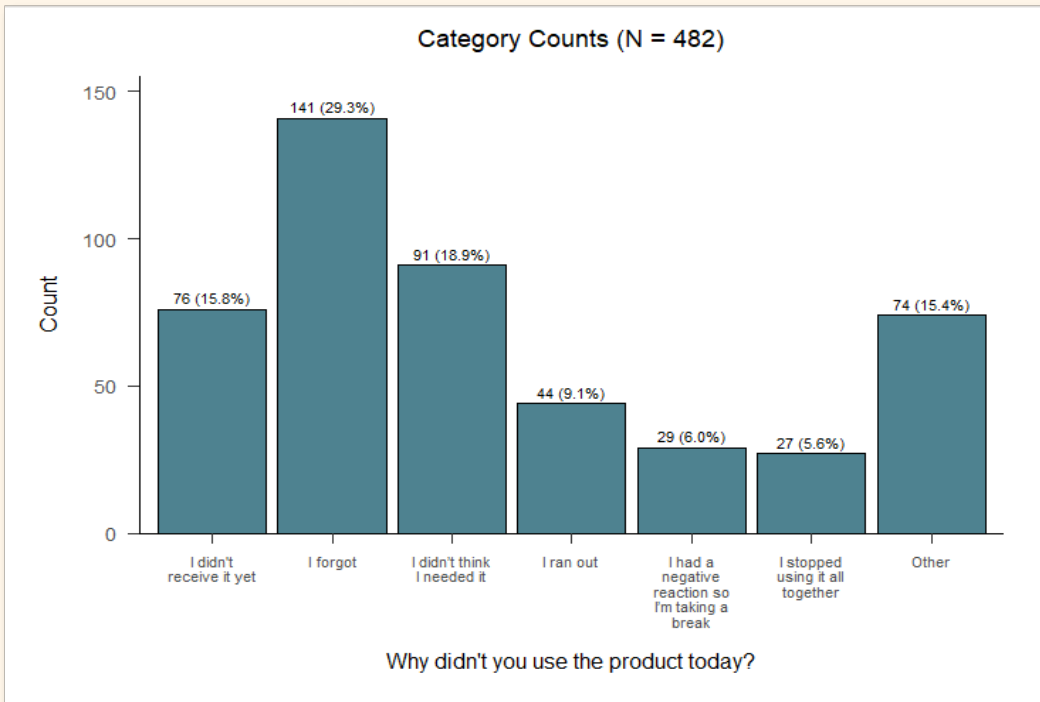
Answers	Total N (%)
Only one time	136 (80%)
Two times	19 (11.2%)
Three times	2 (1.2%)
Four times	13 (7.6%)

PROUDCT USE & EFFECTS

How many participants used the FloraWork' TruCBN Softgels each day compared to those who didn't, compared to those who missed the questions that day



On days the FloraWork' TruCBN Softgels was not used, why not?



In a few words, please share why you didn't use the FloraWork' TruCBN Softgels last night? (Other entries)

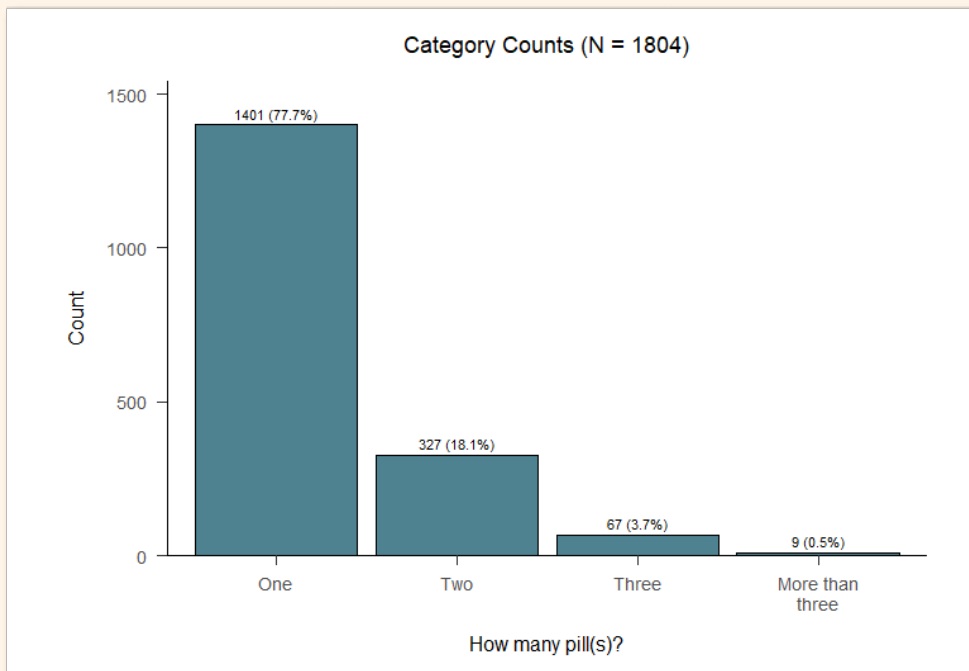
Response	Text
1	I wanted to take a small break to see if I felt a dependence on it.
2	I wanted to take a break from using it every night.
3	I'm just taking a break
4	The 3-hour window between when I was ready to sleep and when I needed to answer questions was too short to properly test the products efficacy. Will start tonight.
5	I have not gone to bed yet. Pulled an all nighter working on my Halloween costume.
6	I was nauseous and didn't want to risk increasing my pain.
7	My stomach was hurting
8	I had to go to work early and I don't quite trust its duration of activity yet
9	I want to wait until I'm not scheduled to work as I don't know what its duration of action is on me
10	Will begin tonight
11	I had to wake up early. Go to a meeting and didn't want to be tired.
12	I had to wake up early to drive. I didn't want to feel sleepy.
13	Because someone gave me a Xanax tablet so I used that last night and I slept for hours uninterrupted. But I'll try to take the cbn soft gels tonight.
14	I'm traveling for the next 3 days and didn't want to experiment during the trip
15	Traveling until Wed
16	Traveling
17	Traveling. Will use it tonight for the first time
18	I dont think it's working. It seems to make my sleepy when I take it but I don't have issues falling asleep. My challenge is with staying asleep, and this doesn't seem to help.
19	I took cold medicine and wasn't sure how they would mix.
20	I was feeling sick with a runny nose and cough and feel asleep early
21	I took benedryl because i was around a cat and it put me to sleep.
22	Was sick, fell asleep early
23	Antibiotics
24	Still taking antibiotics
25	I needed to go to work today, so I thought it best I not use it last night
26	Wasn't feeling great
27	Sick
28	I'm out of the country and I didn't want to travel with them. I figured since I'm near the end of the study, it would be fine. I do wish I had just brought them. :(

Response	Text
29	Out of the country
30	Out of the country. I will resume use tonight
31	Fell asleep on the couch before usual bedtime.
32	I am having surgery & was told to not take it.
33	Surgery
34	I used medicine to treat hives that makes me feel drowsy and didn't want it to interfere with my results.
35	I am on trial for new allergies medicine per my doctor.
36	I had other meds that might interfere
37	I just got it this morning 10/28 and will take it tonight
38	Have a small cold that is starting, so I took medication to help with this
39	I was not feeling well, so I took that medication instead
40	I have a bad cold
41	Not willing to take a sleep aid when I only have time for 5 hours of sleep
42	It was late when I got home and I didnt want to over sleep
43	Didnt get home till late
44	I had wine yesterday
45	Had grandbabies
46	Wasn't home
47	A lot of times I go to bed at like 9:00 or 10:00 and then get up at midnight or 1:00 and work and then I take the the smart gels. But last night I went to bed at 11:30 and I expected to get back up at 1:00 and work and I would take the smart gel after that but I didn't end up getting up again so I didn't get to take the smart gel
48	Last night I went to bed at 9:00 or so intending to sleep for a little while and get up and work. And I did but I got up at like 1:00 a.m. And then I worked till 5:00 no I work till 6:00 and I went to bed so I didn't get to take the soft gel because I didn't want to take it at 6:00 a.m. because I was planning on getting up around 8:00 a.m. although now it's 10:00 a.m. so because I didn't do a normal sleep I didn't take the soft shells I should do that take the soft shells tonight though
49	I fell asleep kind of early I updated down for a little bit and then ended up not getting back up. I had expected to get back up and take soft gel and then go back to sleep but I didn't so I didn't take it last night
50	As with most nights when I don't take the gel tabs it's because I lie down and think I'm going to get back up and work and then I just fall asleep and don't get back up. Of course I don't actually sleep the whole night cuz I don't sleep properly but that's my life. So I'll remember tonight
51	Anything to make it I'm driving back to Missouri today and I drove all night. So there was no opportunity for me to take the soft gel because I was just napping off and on over the night

Response	Text
52	I drove from NY to Mo yesterday and got home and got settled. I left the softgels in the car and didn't feel like going out to the car at 1 am to get them. I'll start again tonight
53	I fell asleep before I was planning on taking it
54	Traveling to another state
55	Traveling out of state
56	I took night time cold medicine bc I'm sick
57	I took otc cold medicine
58	Needed to get up early for work and was unsure how it would affect my ability to wake up
59	I need to start then on my off days which is Wednesday and Thursday to know the effect cannot be half sleep on my job in the prison I will start the med on 11- 11-25
60	I need to start it on 11-11-25. Do to not knowing the effect in of work on 11-12-25
61	Feel asleep reading
62	It was past midnight when I went to bed.
63	Late night hanging out
64	Away from home.
65	Have not been to sleep, working
66	I was away from home last night unexpectedly

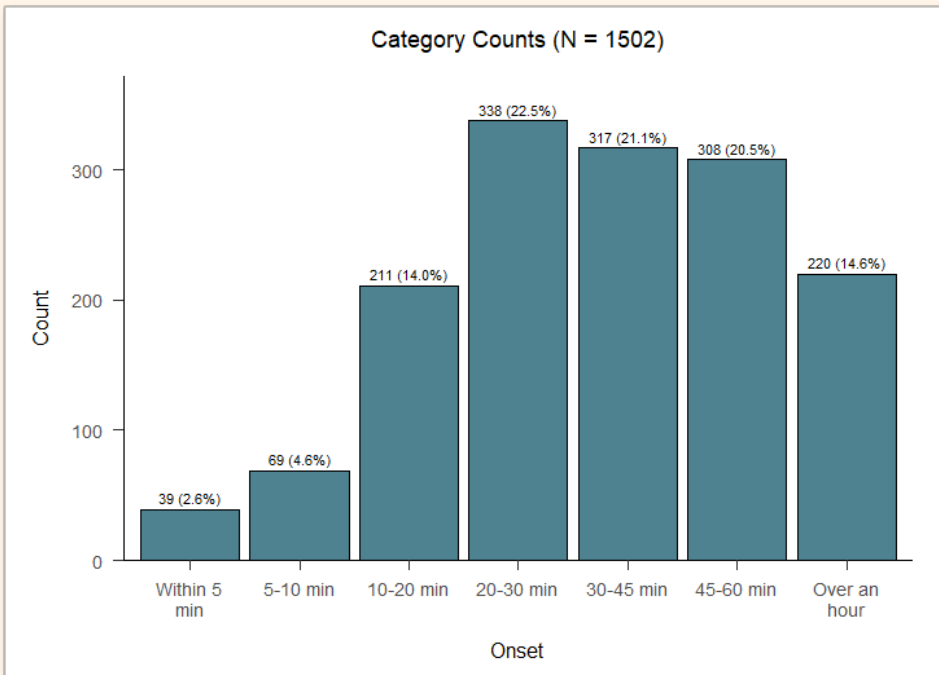
What was the most common dose participants used?

Answer: The most common dose participants used was One pill(s).



What was the most commonly reported onset?

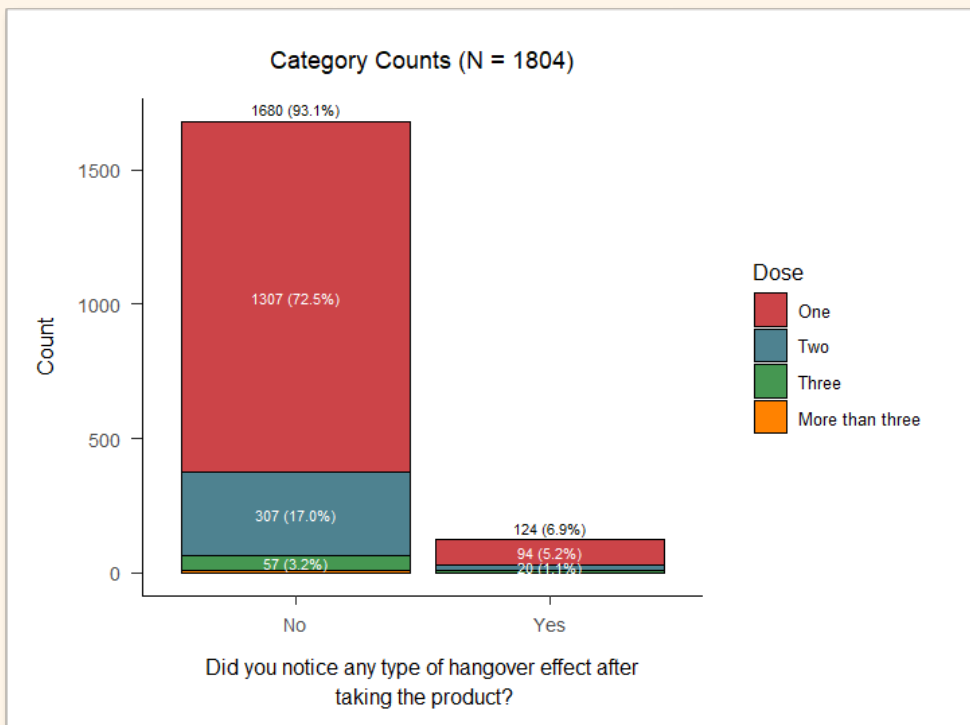
Answer: The most frequently endorsed category of how long it took to feel the effects of the product was: 20-30 min



Did you experience any hangover effects?

Was there a change in feeling any hangover effects?

Answer: The model shows that participants were significantly unlikely to endorse a 'yes' response ($p < .05$).



POSITIVE EXPERIENCES

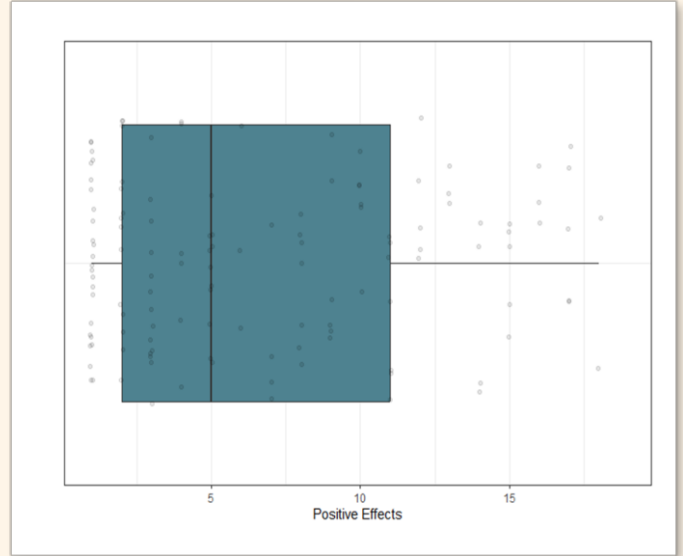
Was it statistically likely or unlikely that they would report a positive effect?

Was there a change in feeling positive effects?

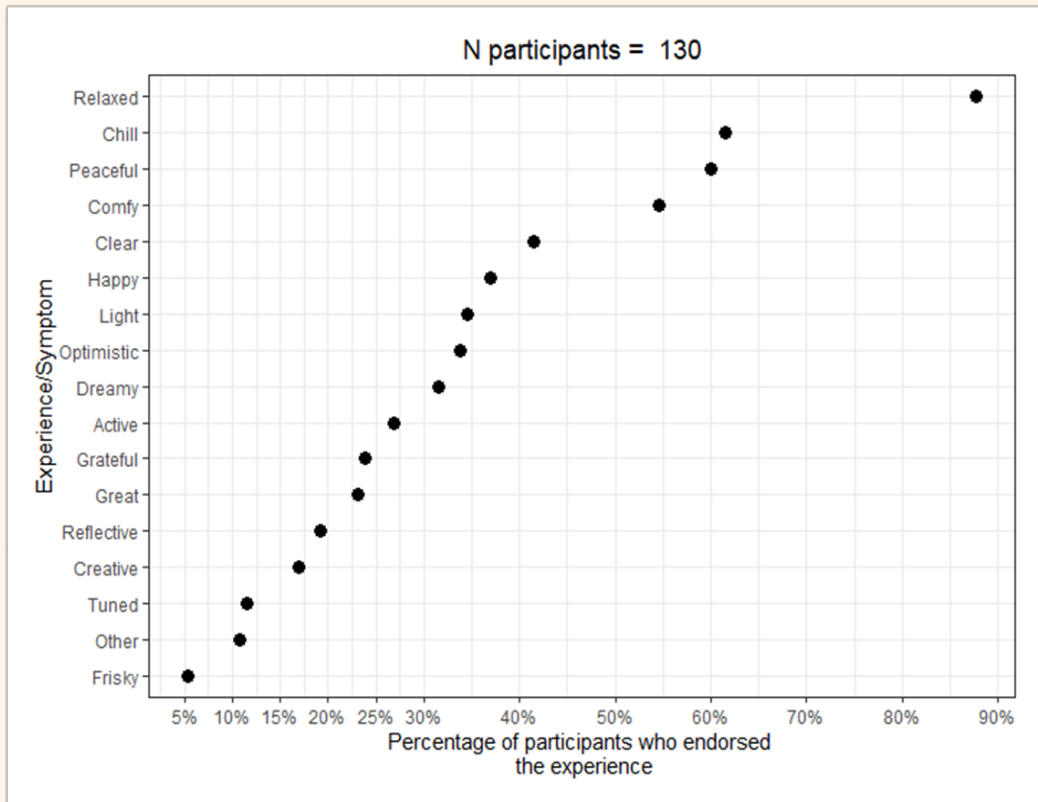
Answer: The model did not find a significant tendency for participants to endorse a 'yes' response, one way or the other ($p > .05$).

Among those reporting 1 or more positive effects from the product (130 participants), the number of times, on average, participants experienced a positive effects: 6.66x over 21 days.

The boxplot displays the minimum values, first (lower) quartile (left side of box), median (dark line in middle area of box), third (upper) quartile (right side of box), and maximum non-outlier values



Among those with positive effects, what were the most common ones experienced?



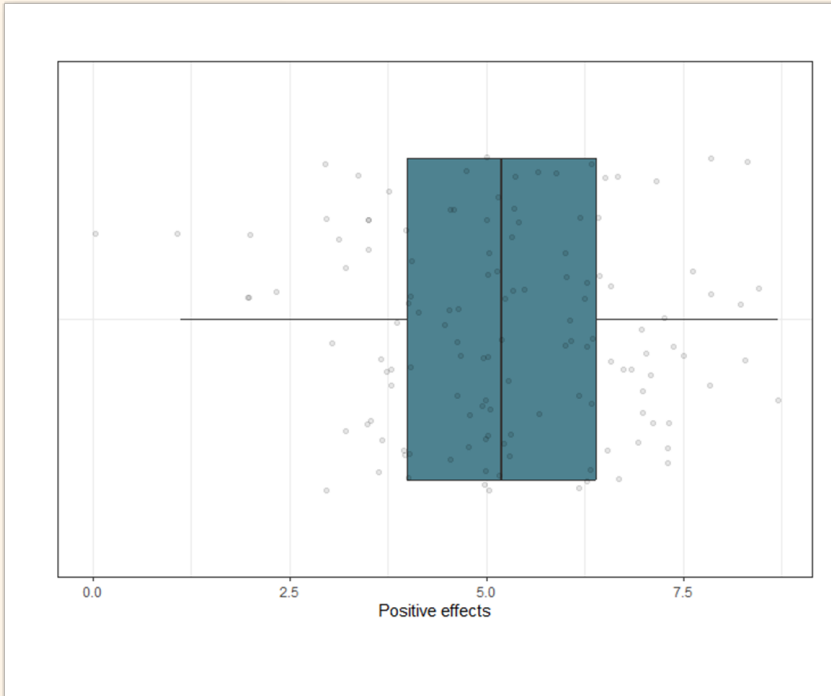
Response	Other Positive Experiences
1	Sleepy at bedtime
2	I'm not sure
3	When I did sleep it was good
4	Sleepy
5	I have my period and I can tell my body was significantly more relaxed while I was sleeping and pain free.
6	Less tired
7	I only woke up three times and perhaps felt a bit more rested this morning..
8	Less pain than normal.
9	Able to fall asleep and stay asleep :)
10	Calm
11	Less waking up once I finally fell asleep and slightly easier to fall back to sleep faster
12	Less pain than I usually have every night
13	I had less pain than normally within an hour of taking the 2 soft gels, only waking up twice was really great but it took me longer than 3 hours to fall asleep again the first time but the 2nd time I fell back to sleep much faster
14	Although my sleep tracker says I woke up 6 times last night I don't even remember waking up once, I had very little pain after pretty stressful day, I held the soft hells in my hand for like 2 minutes before taking them and it warmed one to the point that it opened when I put it in my mouth (only one opened) I THINK that may be one of the reasons why I had a better and faster reaction to the TruCBN softgels and the taste was not at all unpleasant
15	Writhing 30-34 minutes after taking the softgels the pain that I usually feel was SIGNIFICANTLY & NOTICEABLY practically gone even the numbness from my damaged nerves was amazingly hardly there, the night before last one of the softgels opened in my mouth accidentally and I had a great sleep so I specifically poked a small hole in one of the 2 softgels and it worked amazingly well- the sleeping effects came on in under an hour and the effects lasted all night and my sleep teacher says I didn't wake up once
16	My pain was helped but I literally (actually literally) did not sleep even 1 second last night. I took 2 like the nights before that worked great poked a hole in one like the other nights that worked for me and 2 hours later I was wide awake so I took one more but no sleep, I was relaxed and my pain was less but not as lessened as the other nights- the extra pain I feel could be because it just got extremely cold overnight and rainy and I feel that through my entire body. I was relaxed and I felt pain I feel infinitely more pain when I don't take the softgels.
17	Slept thru the night. Sorry I missed years questions my internet messed up and I couldn't get them to load on my phone

Response	Other Positive Experiences
18	Yesterday my pain level was around a 6 or 7 but within 30-45 minutes of taking 2 softgels my pain is melting away with my nerve damage which causes severe burning sensations and painful numbness on my neck and down my entire left side to my toes is practically gone, around a 1 or 2, when I took 1 soft gel it didn't have as much of an effect on my pain and poking a hole in one softgel seems to make my pain melt away writhing 30-45 minutes and I drift off to sleep much quicker and also I believe the small hole in the 1softgel makes the product come on quicker and tje 2nd pill that is intact makes me stay awake longer, the last few nights my sleep tracker says I woke up 5 or 6 times during the night but I honestly can't remember if I wasn't wearing an Apple Watch I would think I slept straight through the night, taking 2-4 hits of weed with the softgels DEFINITELY helps the softgels work better to help me get tired I wait about 30-45 minutes before I smoke in case I don't need it or do need a little extra push to sleep instead of taking an extra softgel. If I was having a pain flare up I think taking an extra softgel would help... but I'll cross that bridge if it comes to it
19	As usual the softgels helped my pain allowing me some relaxation but I have not slept for even one second in the last 2 nights. On the upside I am totally exhausted so I hope I can get some sleep tonight I have my fingers crossed
20	Pain relief of my nerve and musculoskeletal and spinal damage- BUT for the 2nd now gut in a row I did not sleep even one minute.
21	The pain relief I have from the musculoskeletal & nerve pain from a car accident is truly amazing, after not sleeping for 2 days I had amazing sleep last night which is great because I got the flu too
22	My musculoskeletal and nerve pain was lessened to the point I could relax and be able to sleep, I am ok with only getting 3 hours sleep last night since the day before I slept a little over 10 hours
23	The softgels are really great for the severe nerve damage and musculoskeletal pain allowing me to sleep, I find I have the best effects if I poke a tiny hole in one softgel and leave the others so it comes on slightly quicker and lasts longer, I dropped fown to 2 softgels because I am waiting to recurve another box that has been mailed, I have enough to take 2 tonight as well and then I will run out but hopefully the mail delivers the new box in time for no interaction, I am also quite sick with a bad chest cold so lan taking cold medicines and cough syrups with the softgels as well which is probably why iw as able yo take 2 and have great effects again
24	did not have any effects

Rate the strength of the positive effects (0-10)

Answer: Among those reporting having any negative effects from the product, the average strength of the negative effects (0-10 scale; 10 = being a strong effect) was 5.26 (SD=1.62) over the product use phase.

The box plot displays the minimum values, first (lower) quartile (left side of box), median (dark line in middle area of box), third (upper) quartile (right side of box), and maximum non-outlier values



NEGATIVE EXPERIENCES

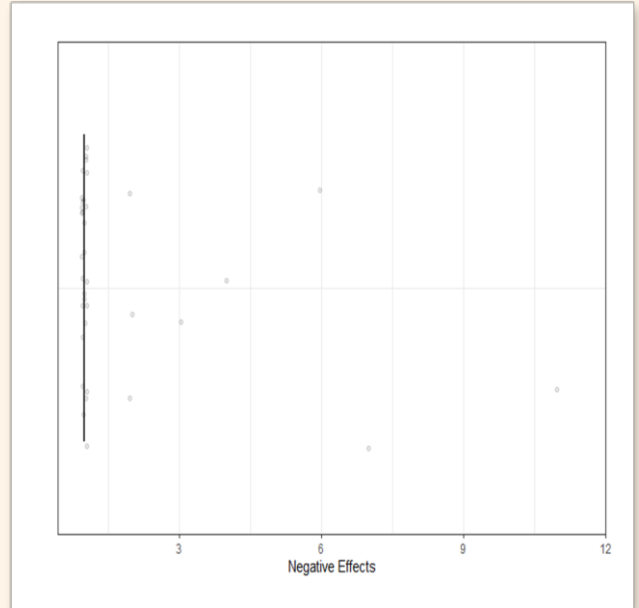
Was it statistically likely or unlikely that they would report a negative event?

Was there a change in feeling negative effects?

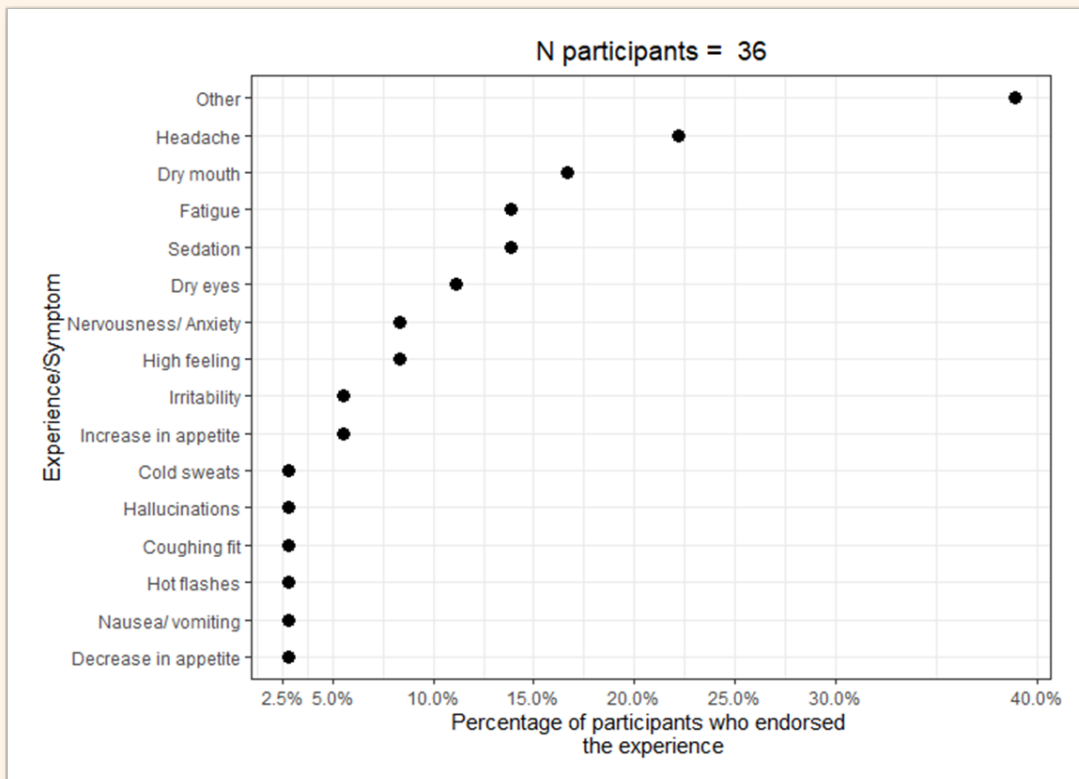
Answer: The model shows that participants were significantly unlikely to endorse a 'yes' response ($p < .05$).

Among those reporting 1 or more negative effects from the product (36 participants), the number of times, on average, participants experienced a negative effects: 1.81x over 21 days.

The boxplot displays the minimum values, first (lower) quartile (left side of box), median (dark line in middle area of box), third (upper) quartile (right side of box), and maximum non-outlier values



Among those with negative effects, what were the most common ones experienced?

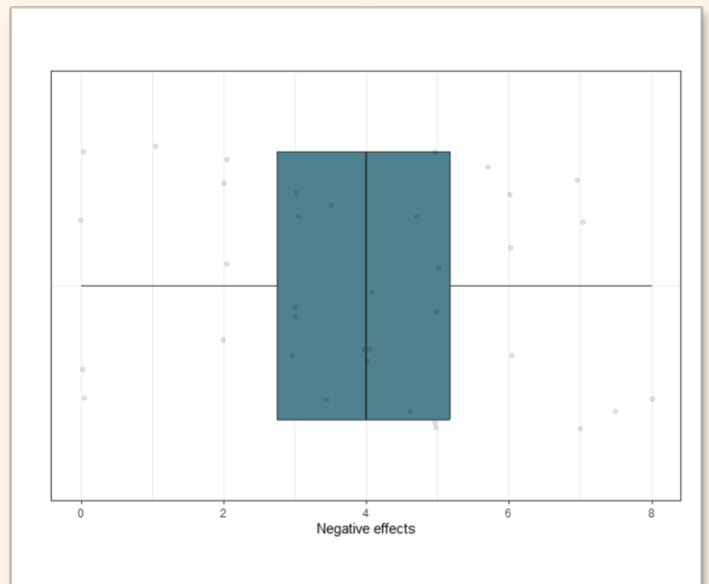


Response	Other Negative Experiences
1	super bad indigestion
2	indigestion
3	Very strange dreams that seemed tied to my pain
4	Dry cough
5	Heartburn
6	Nothin I hit the wrong button
7	I have not mentioned it before because I wasn't sure if it was relevant. But I definitely have heart had a harder time emptying my bladder since I have taken this supplement. I am going to stop taking this supplement based on this fact and the fact that I am unable to cut them in half and use a smaller dose. Thank you
8	Peaceful
9	Constipation
10	Drowsy
11	I took it last night at nine I didn't fall asleep until after five this morning
12	None
13	There was a ringing in my ears last night while trying to sleep.
14	Woke up starving. Yesterday and today. Other then that helped me stay a sleep most of the night. Love that
15	morning grogginess

Rate the strength of the negative effects (0-10)

Answer: Among those reporting having any negative effects from the product, the average strength of the negative effects (0-10 scale; 10 = being a strong effect) was 3.93 (SD=2.21) over the product use phase.

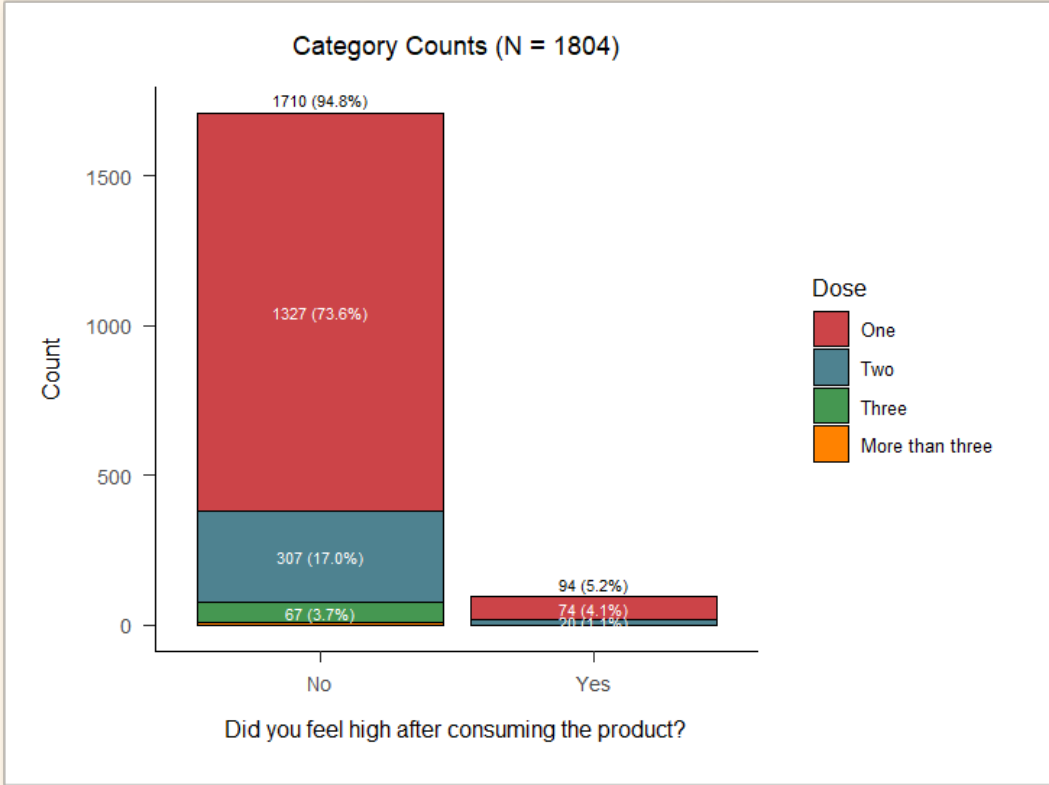
The box plot displays the minimum values, first (lower) quartile (left side of box), median (dark line in middle area of box), third (upper) quartile (right side of box), and maximum non-outlier values



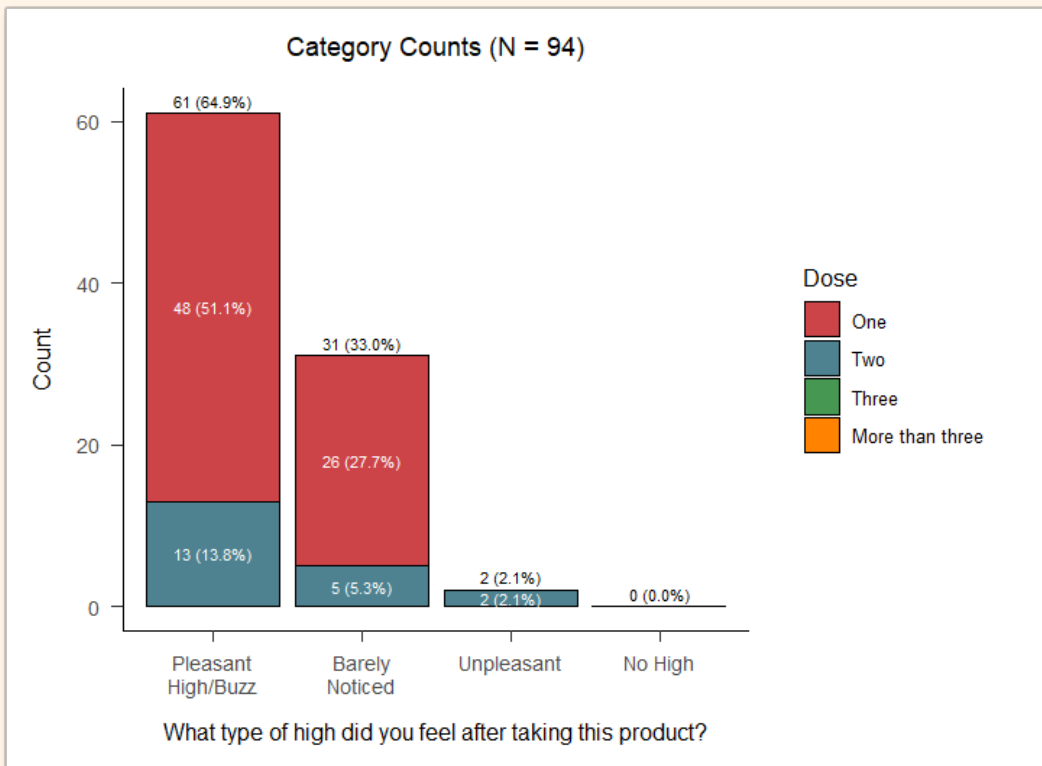
HIGH FEELING

Did you feel high after consuming the FloraWork' TruCBN Softgels?

Answer: The model shows that participants were significantly unlikely to endorse a 'yes' response ($p < .05$).

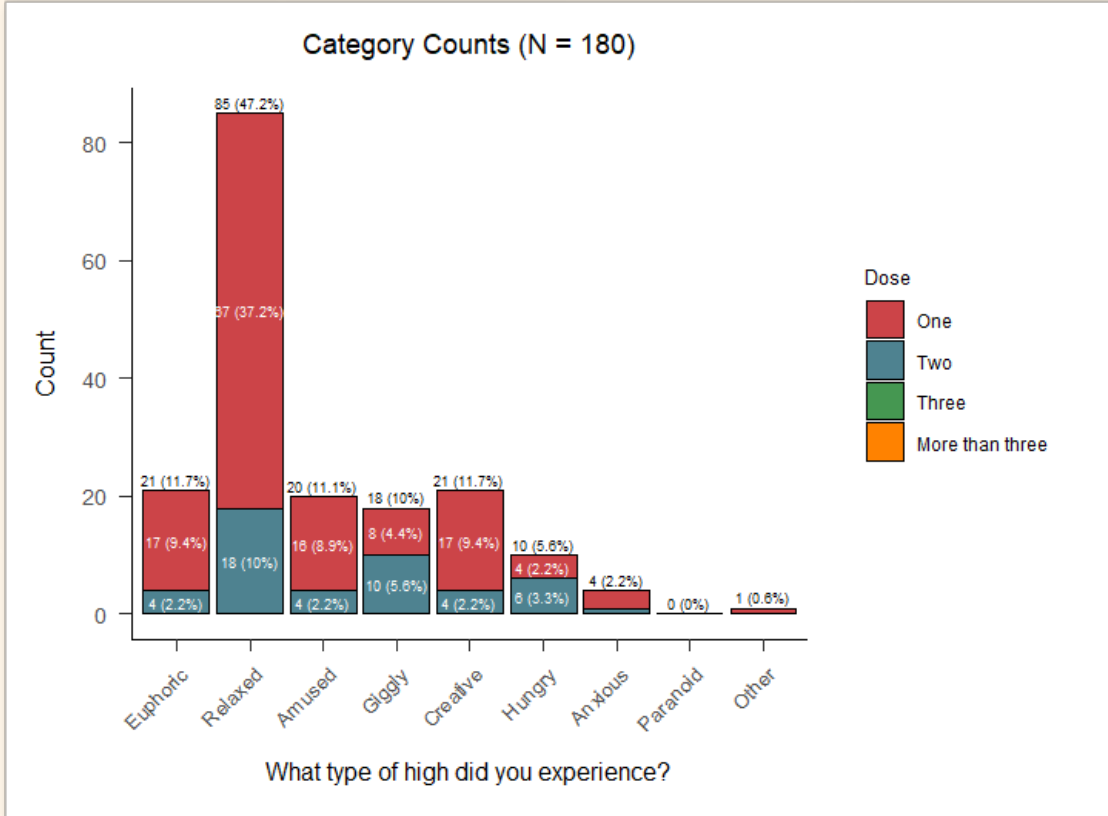


How high did you feel?



What type of high did you experience?

Answer: The model shows that participants were significantly unlikely to endorse a 'yes' response ($p < .05$).



DAY 0 vs DAY 29

How satisfied have you been with your ability to fall asleep and your sleep patterns?

Was there a change in the ability to fall asleep and sleep patterns satisfaction?

Answer: Yes, there was a statistically significant change in Ability To Fall Asleep And Sleep Patterns Satisfaction (p-value < .05). This change was in the expected positive direction.

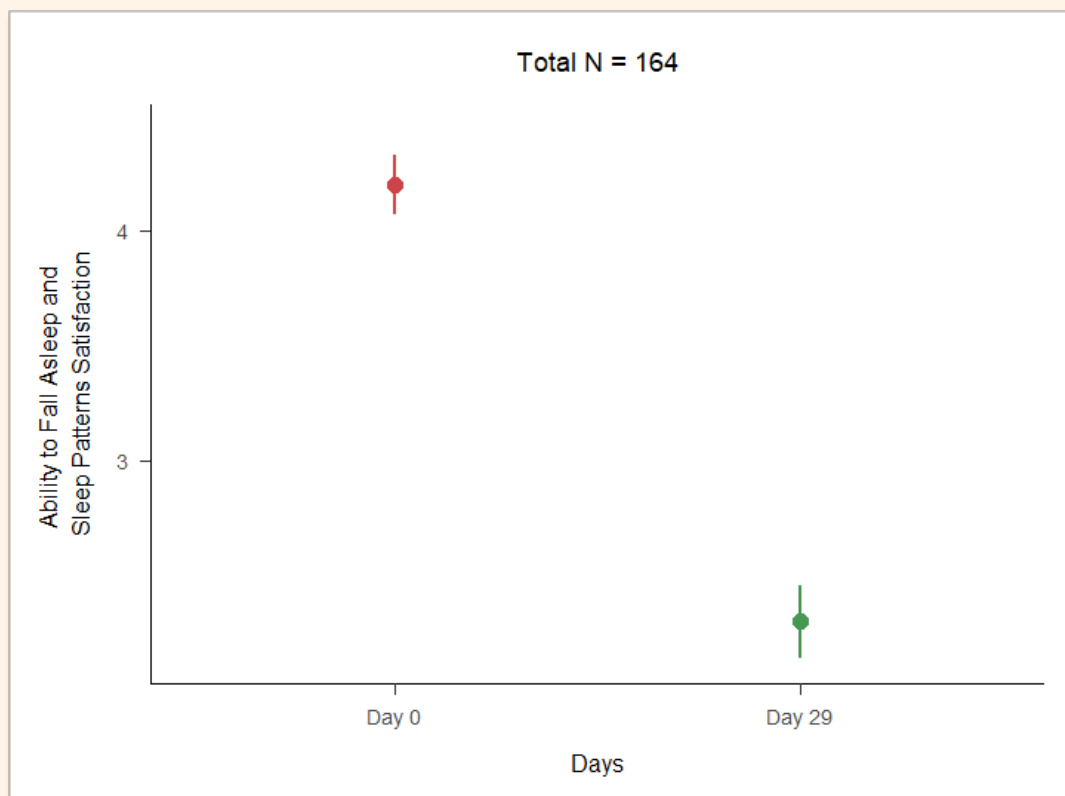
Note: Scores range from 1 (Very satisfied) to 5 (Very dissatisfied).

Day 0 Score (Pre Product): 4.2

Day 29 Score (Post Product): 2.3

This is -1.9 point (-45.25%) change in the ability to fall asleep and sleep patterns satisfaction score (Lower scores are better).

The figure shows the estimated average scores (points) and 95% confidence intervals (error bars) for the “No Product Use” (red) and “Product Use” (green) conditions, as predicted by the linear mixed-effects model.



How satisfied have you been with your ability to stay asleep?

Was there a change in ability to stay asleep?

Answer: Yes, there was a statistically significant change in Ability To Stay Asleep (p-value < .05). This change was in the expected positive direction.

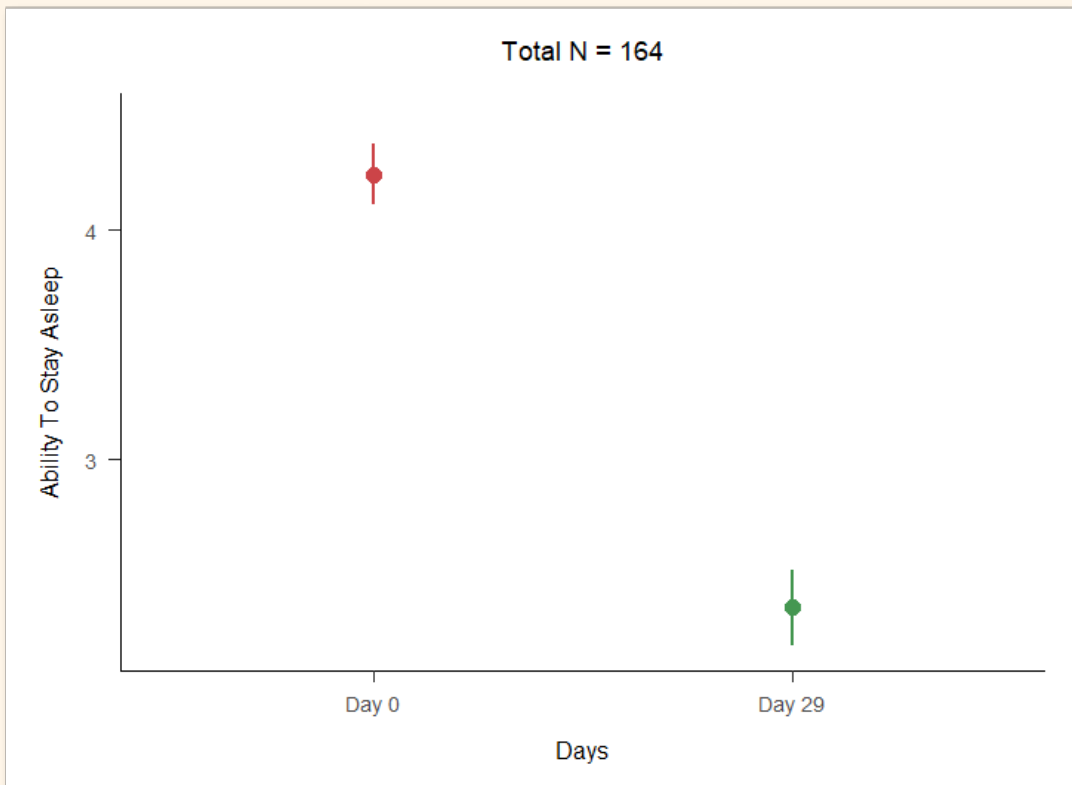
Note: Scores range from 1 (Very satisfied) to 5 (Very dissatisfied).

Day 0 Score (Pre Product): 4.24

Day 29 Score (Post Product): 2.36

This is -1.89 point (-44.47%) change in the ability to stay asleep score (Lower scores are better).

The figure shows the estimated average scores (points) and 95% confidence intervals (error bars) for the “No Product Use” (red) and “Product Use” (green) conditions, as predicted by the linear mixed-effects model.



How would you rate your sleep quality?

Was there a change in sleep quality?

Answer: Yes, there was a statistically significant change in Sleep Quality (p-value < .05). This change was in the expected positive direction.

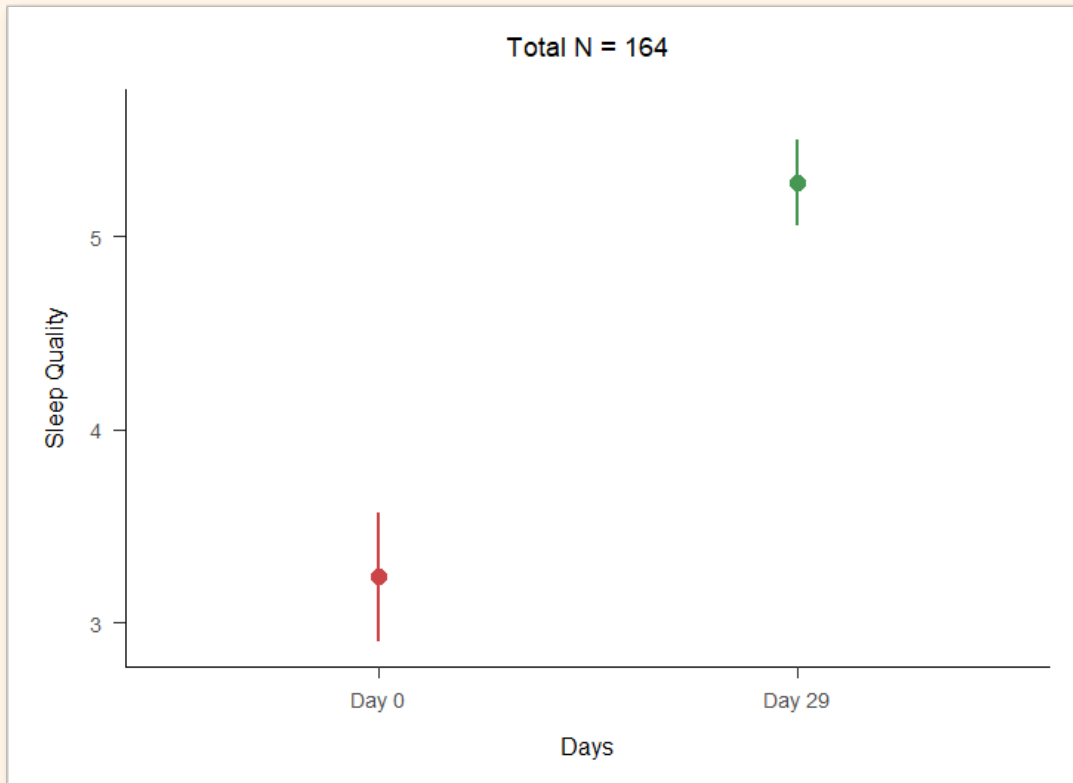
Note: Scores range from 0 (worst) to 10 (best).

Day 0 Score (Pre Product): 3.24

Day 29 Score (Post Product): 5.28

This is 2.04 point (63.05%) change in the sleep quality score (Higher scores are better).

The figure shows the estimated average scores (points) and 95% confidence intervals (error bars) for the “No Product Use” (red) and “Product Use” (green) conditions, as predicted by the linear mixed-effects model.



How many hours do you sleep per night?

Was there a change in hours slept?

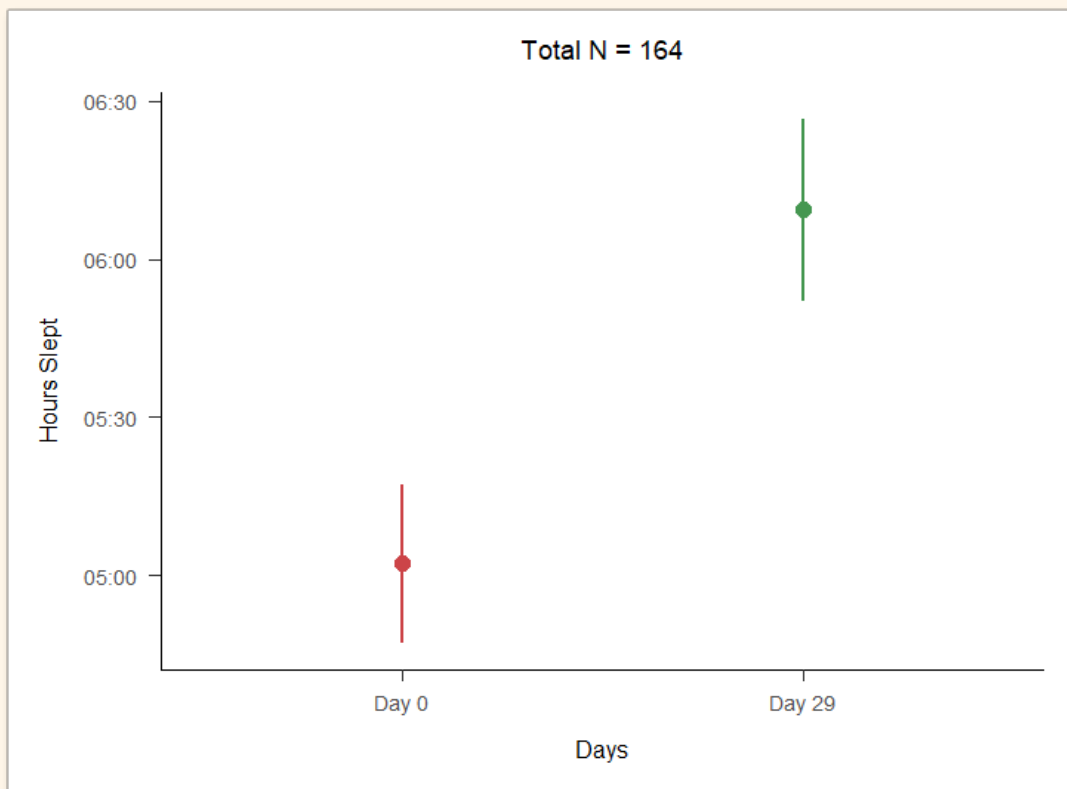
Answer: Yes, there was a statistically significant change in Hours Slept (p -value < .05). This change was in the expected positive direction.

Day 0 Score (Pre Product): 05:02 (HH:mm)

Day 29 Score (Post Product): 06:09 (HH:mm)

This is 01:07 hours (22.2%) change in the hours slept (Higher values are better).

The figure shows the estimated average scores (points) and 95% confidence intervals (error bars) for the “No Product Use” (red) and “Product Use” (green) conditions, as predicted by the linear mixed-effects model.



How many times did you wake up during the night?

Was there a change in the number of times woken up?

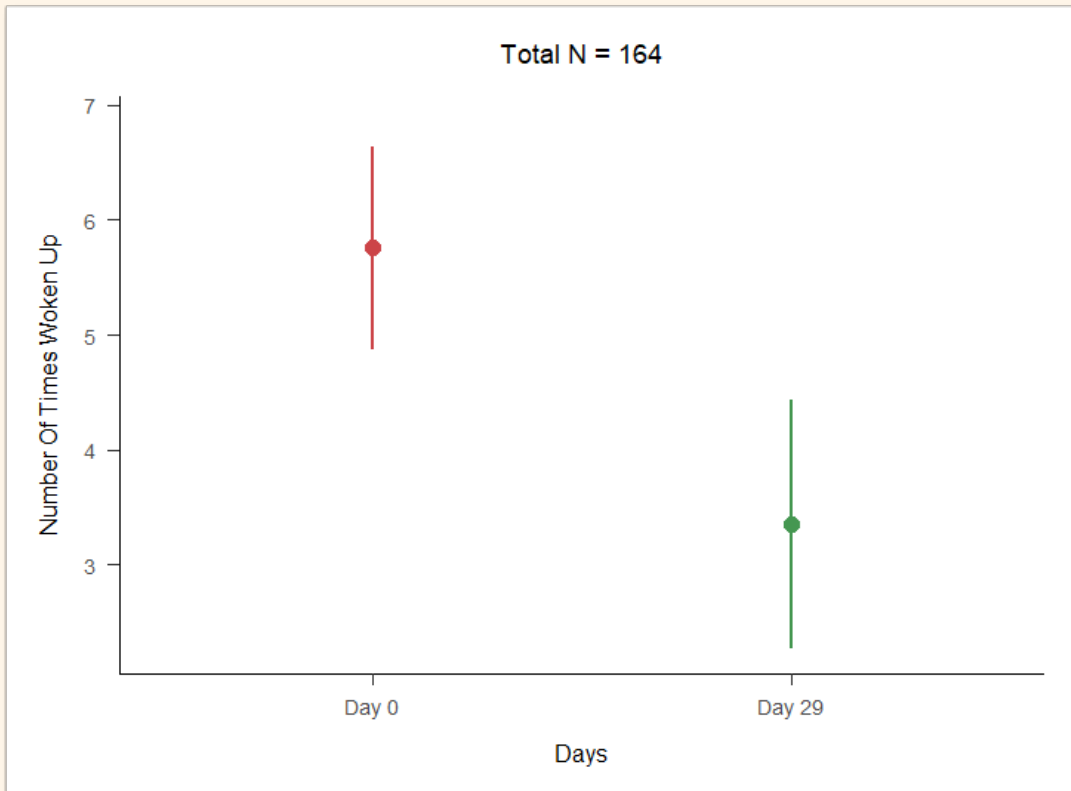
Answer: Yes, there was a statistically significant change in Number Of Times Woken Up (p -value < .05). This change was in the expected positive direction.

Day 0 Score (Pre Product): 5.76

Day 29 Score (Post Product): 3.36

This is -2.4 point (-41.68%) change in the number of times woken up (Lower values are better).

The figure shows the estimated average scores (points) and 95% confidence intervals (error bars) for the “No Product Use” (red) and “Product Use” (green) conditions, as predicted by the linear mixed-effects model.



Does Anxiety impact your ability to fall asleep or your sleep patterns?

Was there a change in anxiety impact on falling asleep?

Answer: Yes, there was a statistically significant change in the odds of anxiety impact on falling asleep (p -value < .05). This change was in the expected direction.

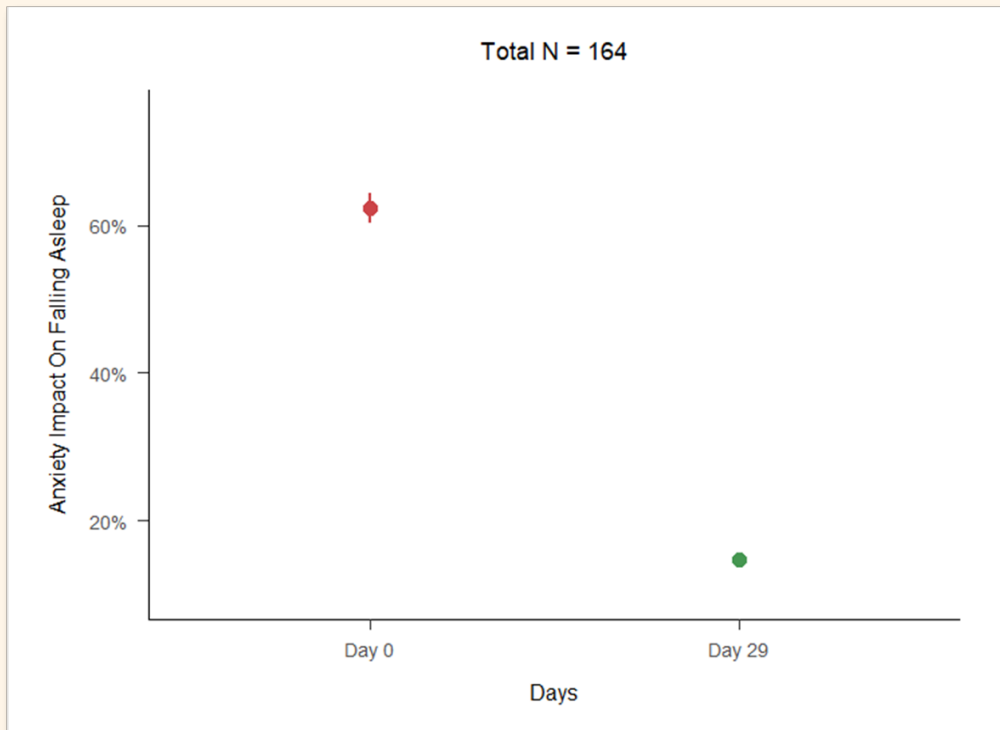
Note that scores on the measure are: No/Yes

Day 0 Score (Pre Product): 62.34%

Day 29 Score (Post Product): 14.84%

This is a -47.5 percentage-point (-76.2%) change in probability of anxiety impact on falling asleep (Lower values are better).

The figure shows the estimated average scores (points) and 95% confidence intervals (error bars) for the “No Product Use” (red) and “Product Use” (green) conditions, as predicted by the linear mixed-effects model.



How significant of an impact does Anxiety have on your sleep?

Was there a change in severity of anxiety impact on sleep?

Answer: No, there was not a statistically significant change in Severity Of Anxiety Impact On Sleep (p -value > .05).

Does Pain impact your ability to fall asleep or your sleep patterns?

Was there a change in pain impact on falling asleep?

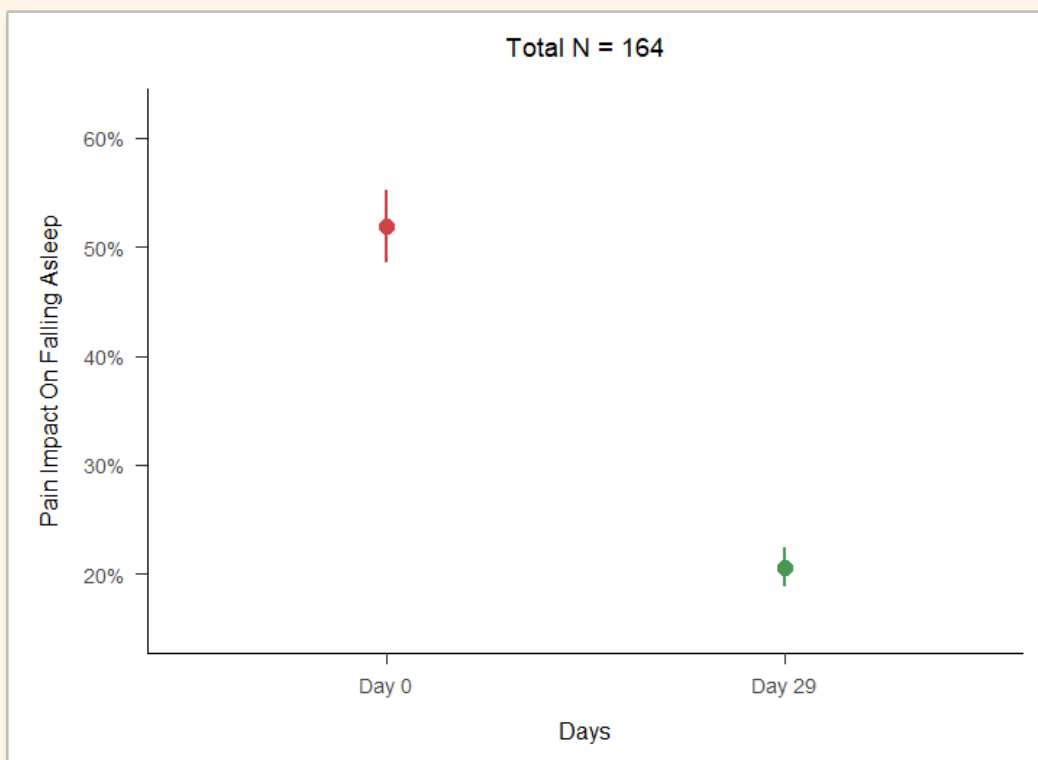
Answer: Yes, there was a statistically significant change in the odds of pain impact on falling asleep (p-value < .05). This change was in the expected direction.

Note that scores on the measure are: No/Yes

Day 0 Score (Pre Product): 51.89%

Day 29 Score (Post Product): 20.58%

This is a -31.31 percentage-point (-60.34%) change in probability of pain impact on falling asleep (Lower values are better).



How significant of an impact does Pain have on your sleep?

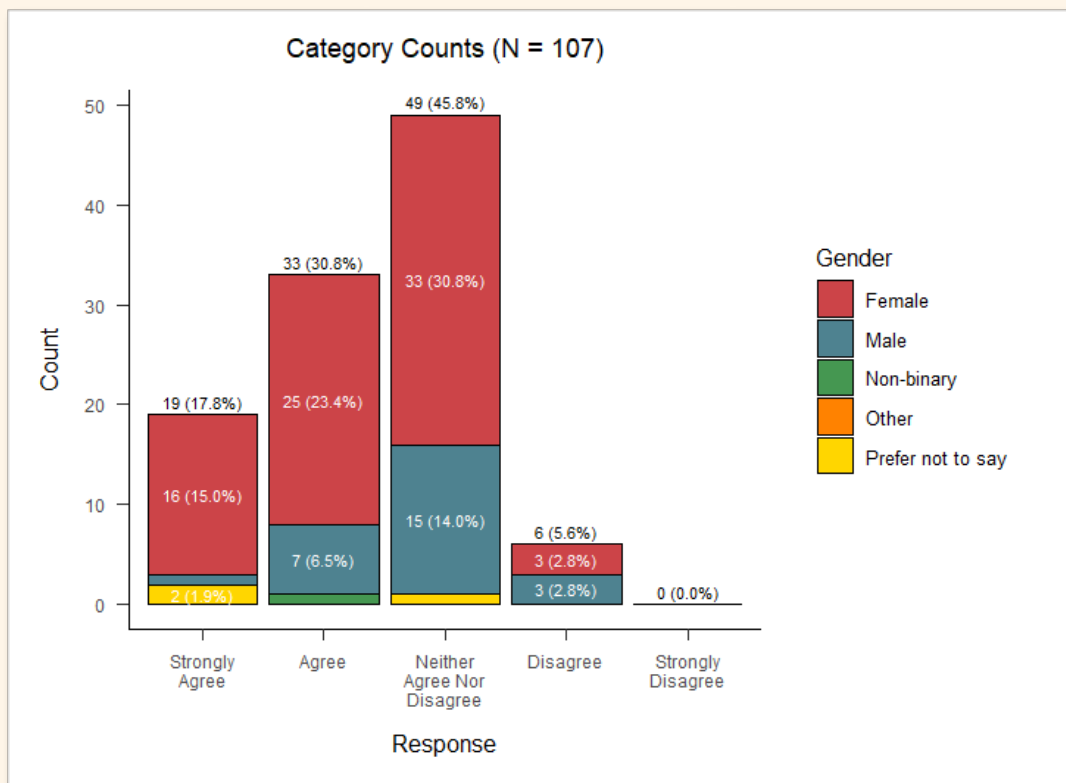
Was there a change in severity of pain impact on sleep?

Answer: No, there was not a statistically significant change in Severity Of Pain Impact On Sleep (p-value > .05).

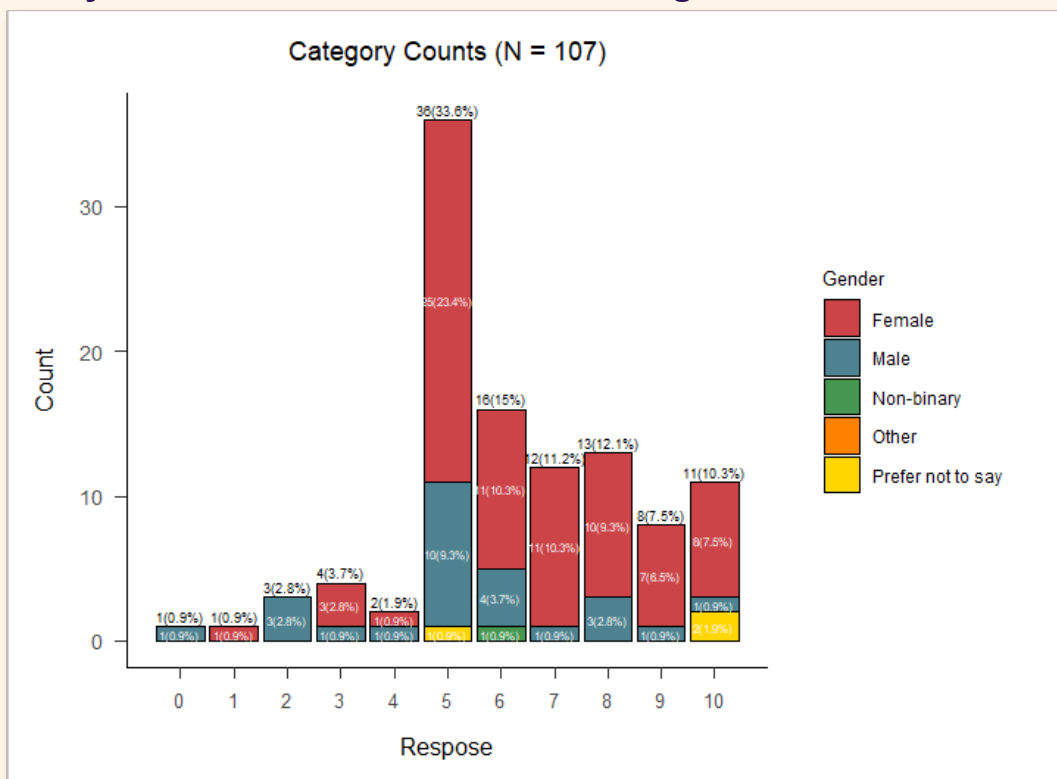
FINAL ANSWERS & I AGREE STATEMENTS

How much do you agree with the following statement: “Overall, I liked the taste of the product”

Answer: N = 52 (48.6%) of participants strongly agree or agree with the statement.

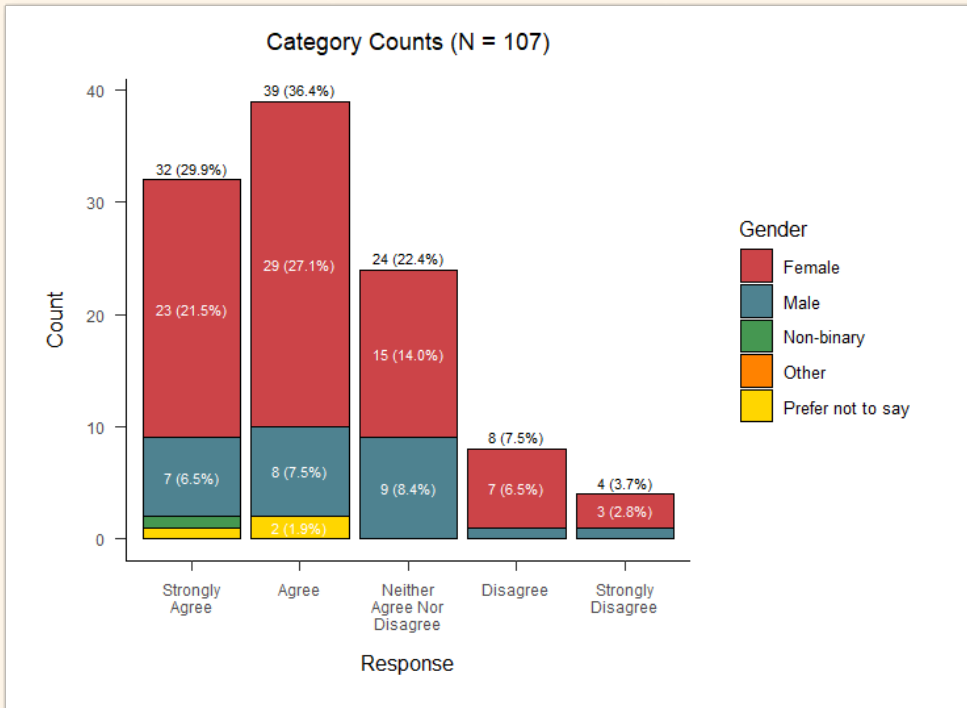


How would you rate the taste of TruCBN Softgels?



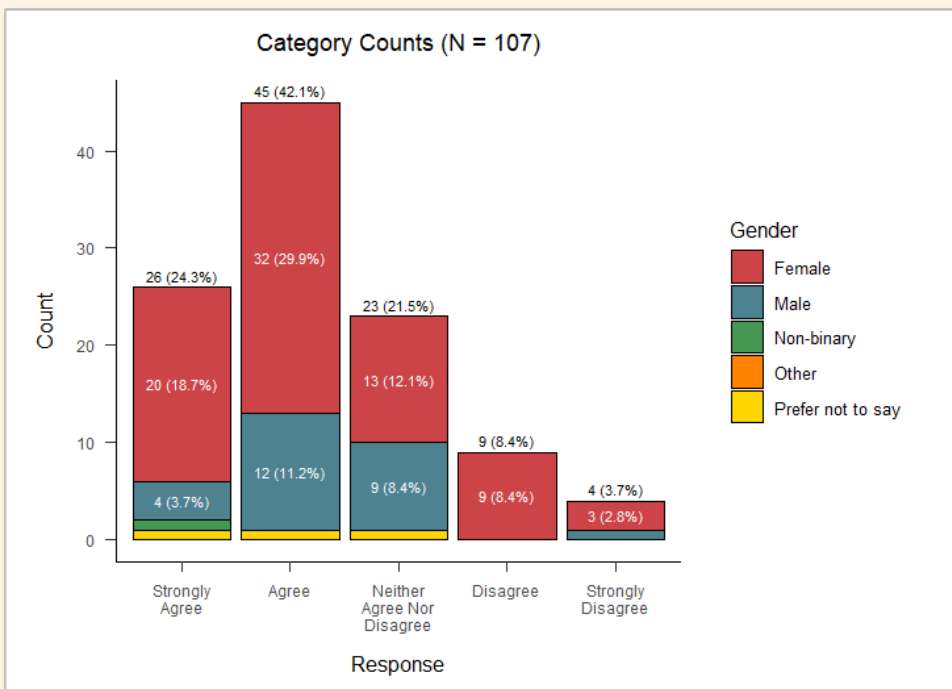
How much do you agree with the following statement regarding your use of FloraWorks’s TruCBN Softgels: “I was able to fall asleep easier when taking the product compared to when not taking the product.”

Answer: N = 71 (66.36%) of participants strongly agree or agree with the statement.



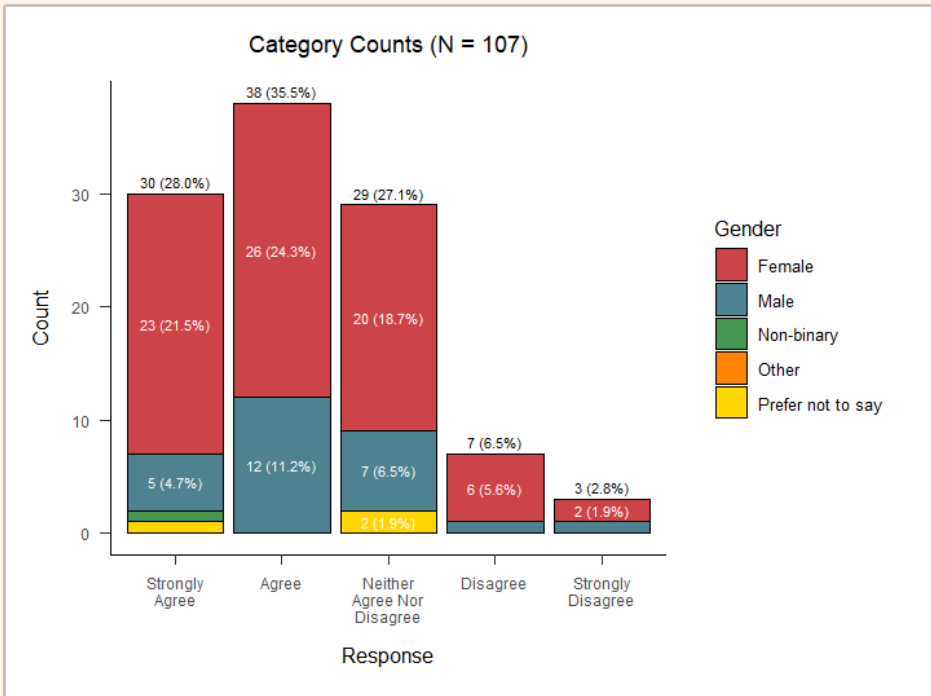
How much do you agree with the following statement regarding your use of FloraWorks’s TruCBN Softgels: “I was able to fall back asleep easier when waking up during sleep while taking the product compared to when not taking the product.”

Answer: N = 71 (66.36%) of participants strongly agree or agree with the statement.



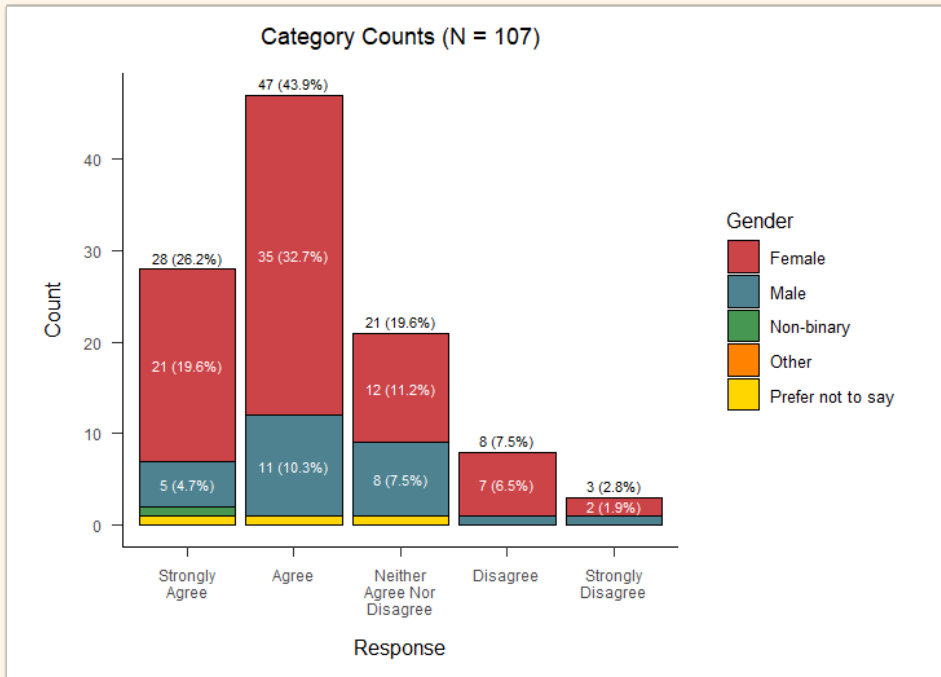
How much do you agree with the following statement regarding your use of `FloraWorks's TruCBN Softgels: "I achieved more quality sleep when using FloraWorks's TruCBN Softgels compared to when not using it."

Answer: N = 68 (63.55%) of participants strongly agree or agree with the statement.



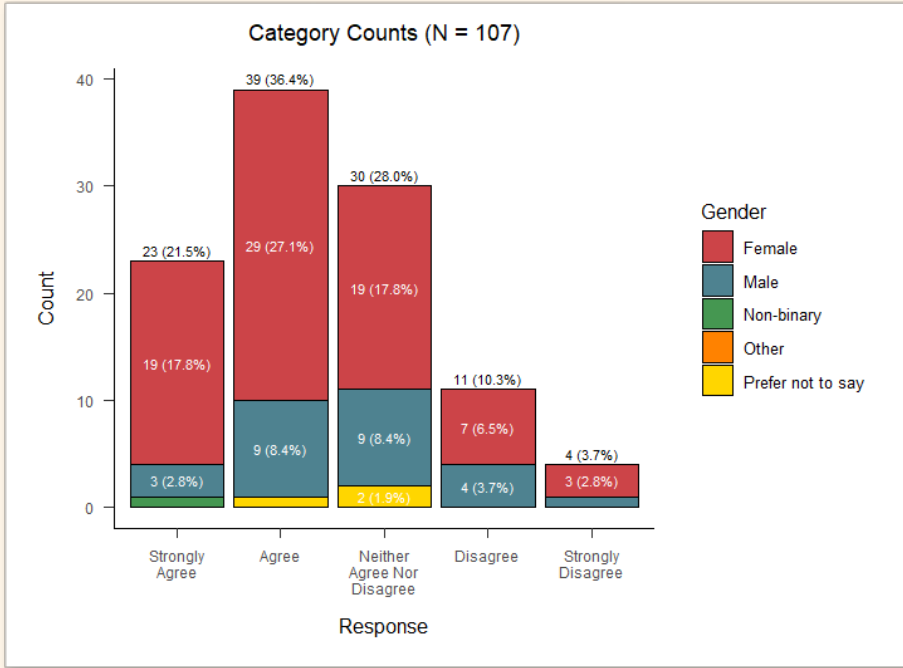
How much do you agree with the following statement regarding your use of FloraWorks's TruCBN Softgels: "I achieved more nights of quality sleep when using the product compared to when not using it."

Answer: N = 75 (70.09%) of participants strongly agree or agree with the statement.



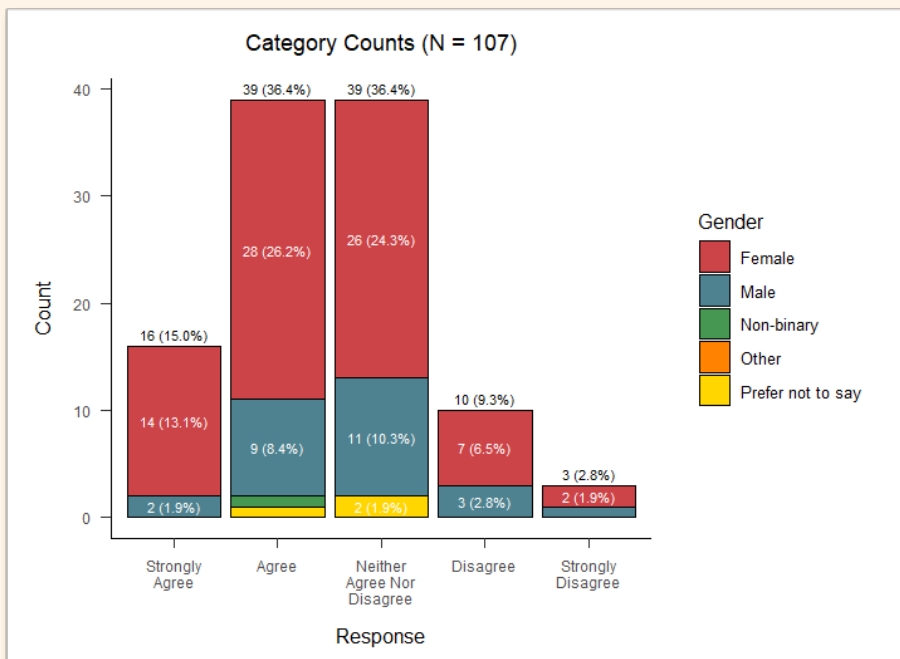
How much do you agree with the following statement regarding your use of FloraWorks’s TruCBN Softgels: “I felt more refreshed in the morning when taking FloraWorks’s TruCBN Softgels the night before, compared to mornings when I did not use it the previous night.”

Answer: N = 62 (57.94%) of participants strongly agree or agree with the statement.



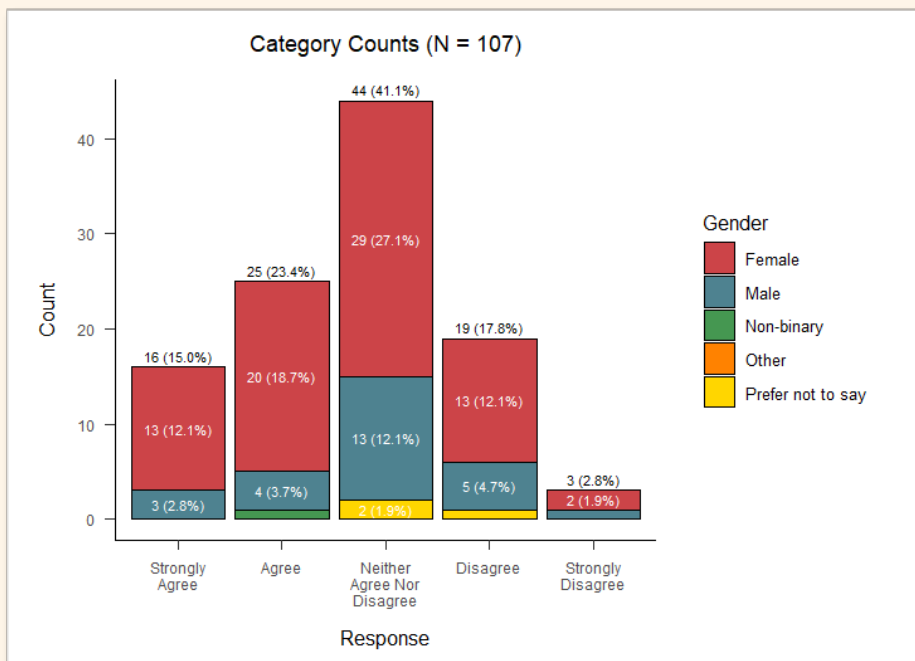
How much do you agree with the following statement regarding your use of FloraWorks’s TruCBN Softgels: “Overall, I experienced less anxiety when taking the product compared to when not taking it.”

Answer: N = 55 (51.4%) of participants strongly agree or agree with the statement.



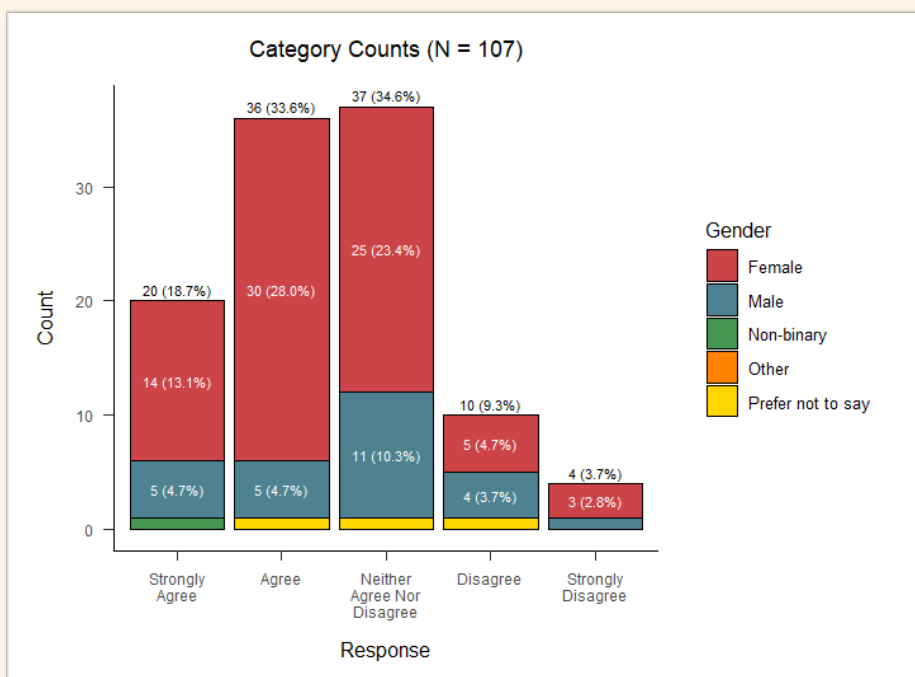
How much do you agree with the following statement regarding your use of FloraWorks’s TruCBN Softgels: “Overall, I experienced less pain when taking the product compared to when not taking it.”

Answer: N = 41 (38.32%) of participants strongly agree or agree with the statement.



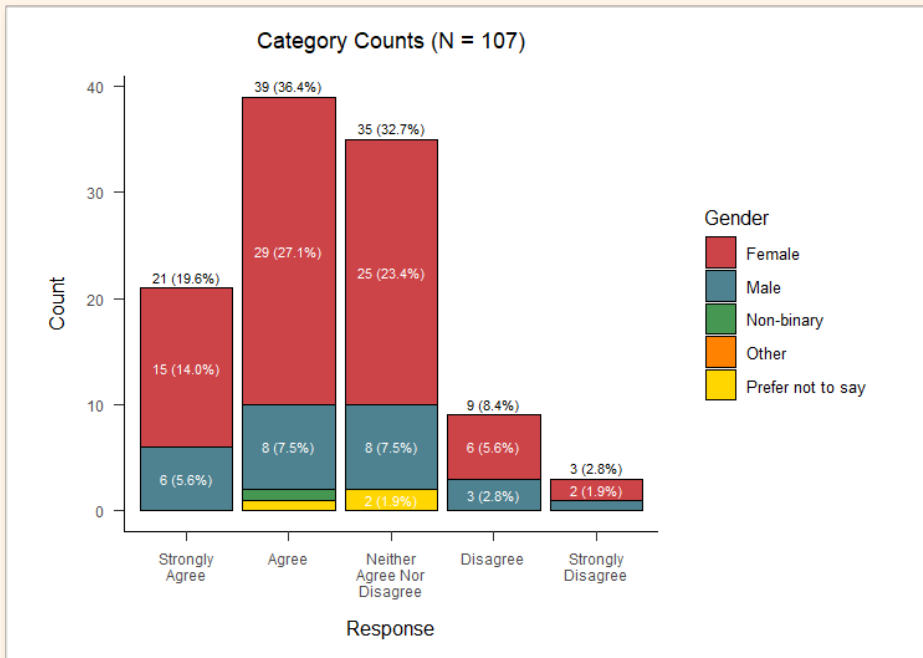
How much do you agree with the following statement regarding your use of FloraWorks’s TruCBN Softgels: “Overall, my energy levels were better during the day when I took TruCBN Softgels the previous night, compared to days after I didn’t take TruCBN Softgels at night.”

Answer: N = 56 (52.34%) of participants strongly agree or agree with the statement.



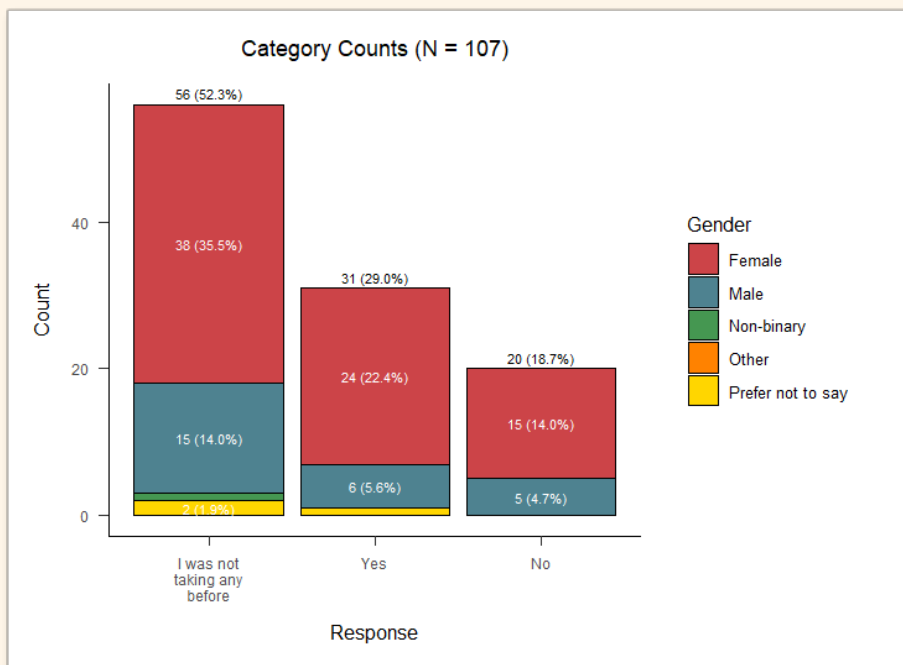
How much do you agree with the following statement regarding your use of FloraWorks's TruCBN Softgels: "FloraWorks's TruCBN Softgels improved my overall quality of life."

Answer: N = 60 (56.07%) of participants strongly agree or agree with the statement.



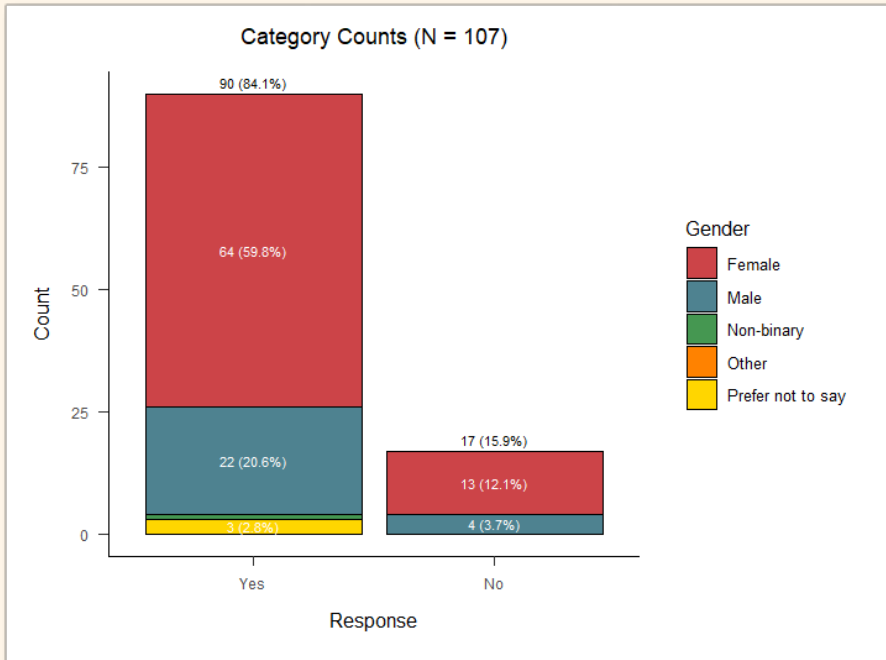
Has FloraWorks's TruCBN Softgels helped you reduce your need and intake of other sleep aids or medications?

Answer: N = 31 (28.97%) of participants indicated that the product helped reduce their need for and intake of other sleep aids or medications.



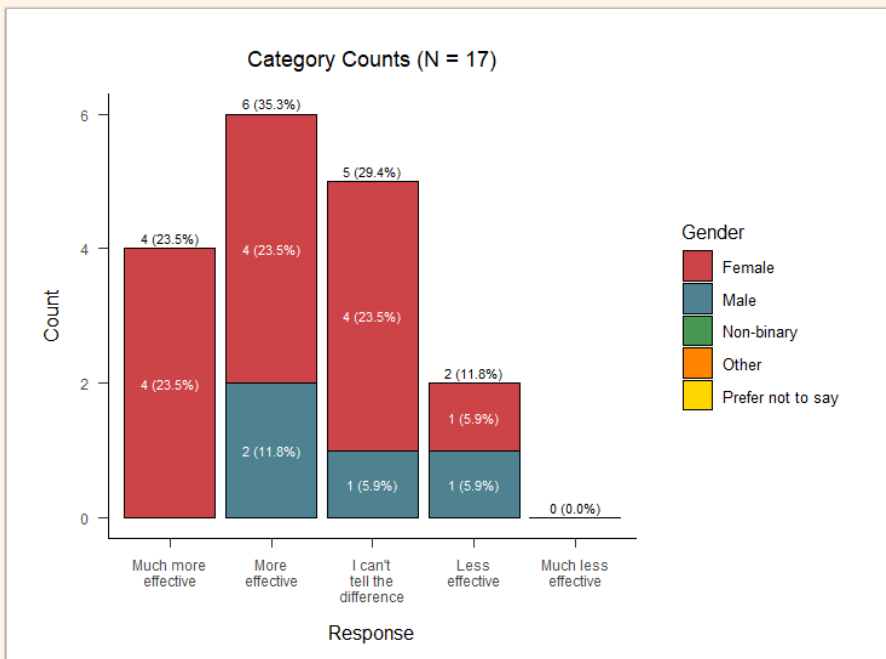
Was this your first experience taking a product containing CBN for Sleep?

Answer: N = 90 (84.11%) of participants indicated that this was their first experience taking a product containing CBN for sleep.



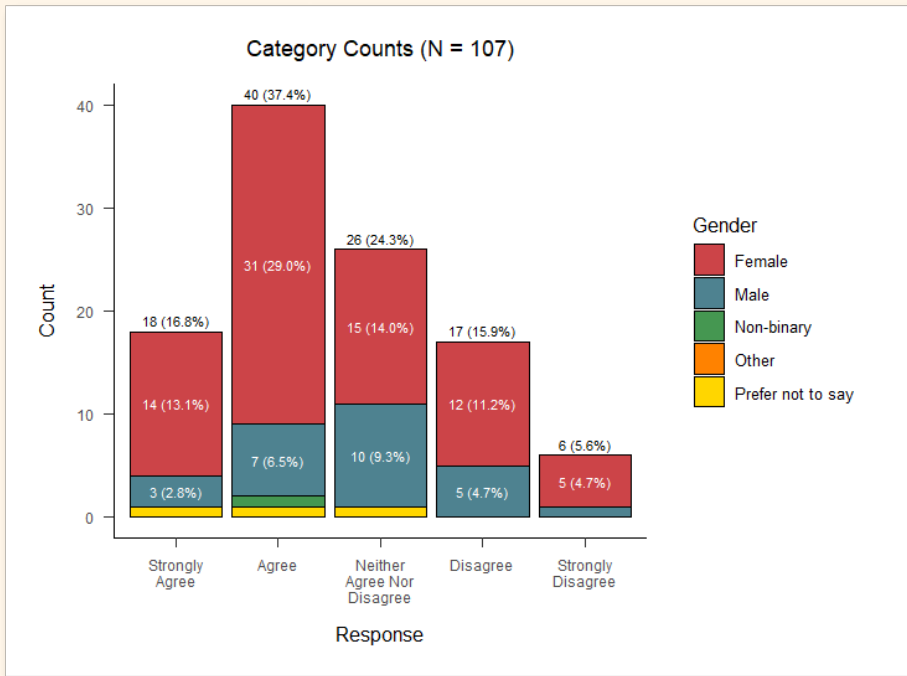
How does FloraWorks's TruCBN Softgels compare to the other CBN product(s) you've tried for Sleep?

Answer: N = 10 (58.82%) of participants indicated that FloraWorks's TruCBN Softgels was much more effective or more effective than other CBN products they had tried for sleep.



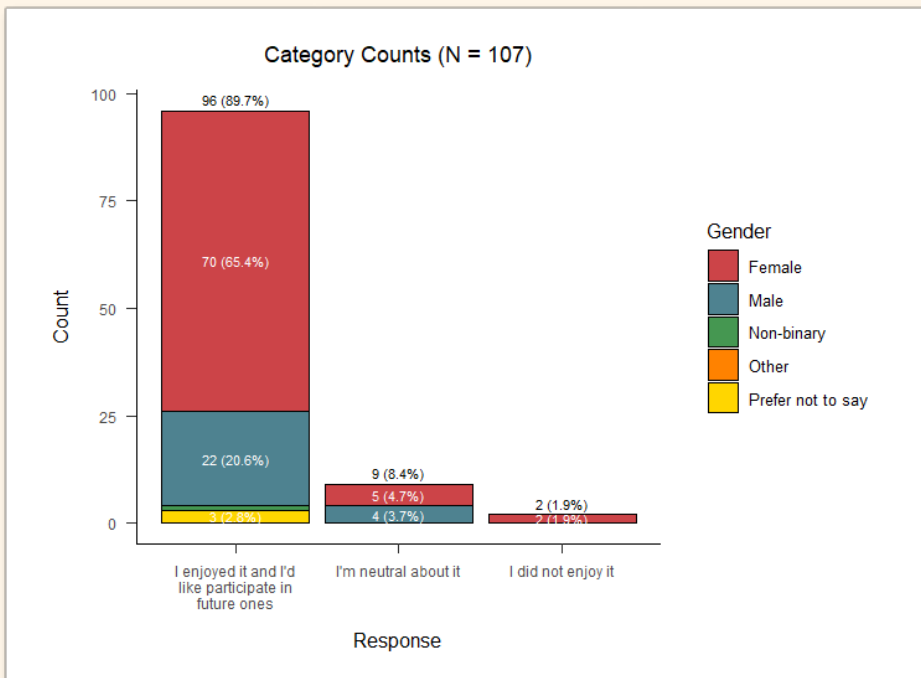
How much do you agree with the following statement regarding your use of FloraWorks’s TruCBN Softgels: “Overall, this product performed better than any other sleep aid I have tried.”

Answer: N = 58 (54.21%) of participants strongly agree or agree with the statement.



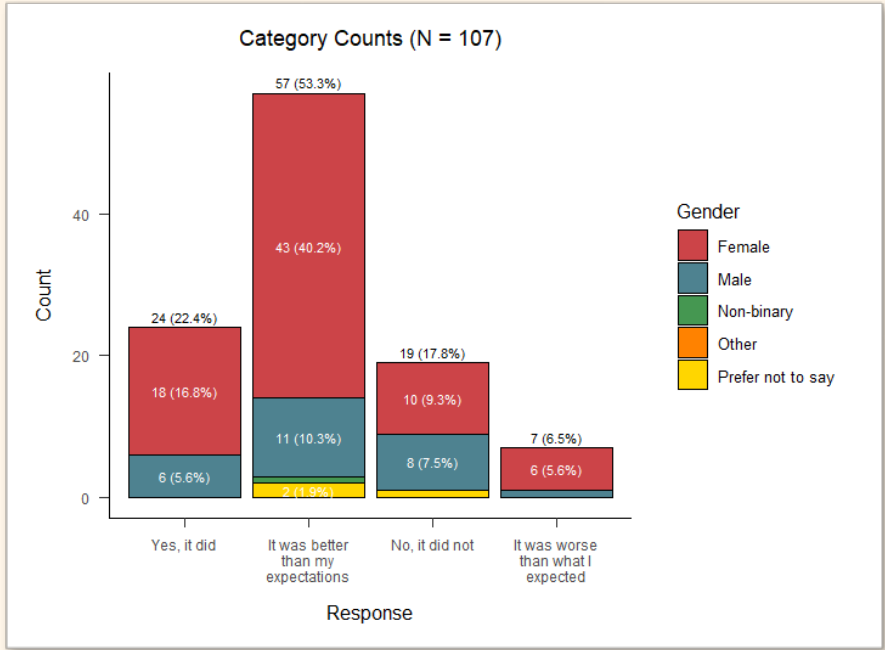
Please select the statement that best represents how you feel regarding your experience in this study.

Answer: N = 96 (89.72%) of participants enjoyed the study and would participate in future studies.



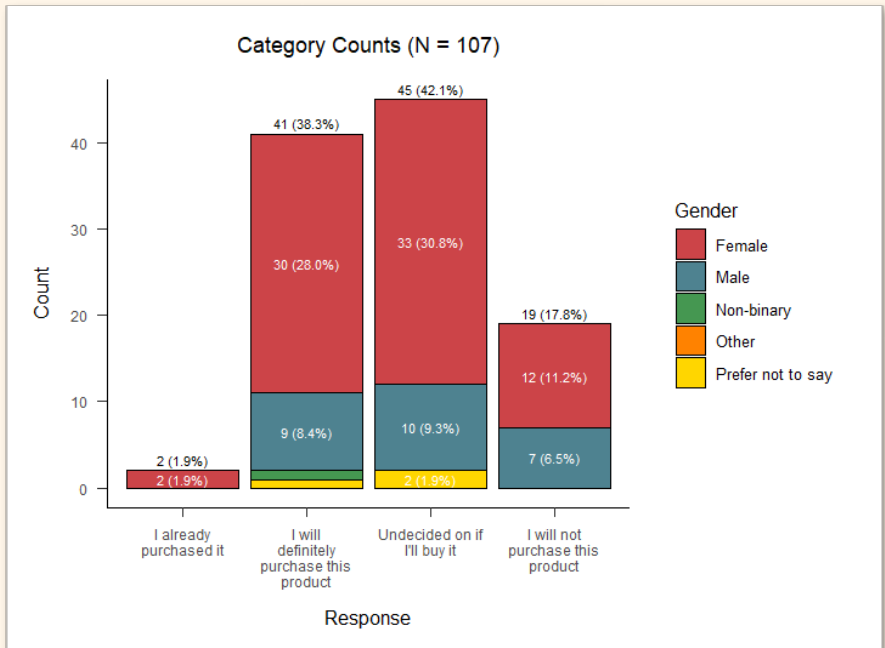
Please tell us about your experience taking this TruCBN Softgels compared to your expectations.

Answer: N = 81 (75.7%) of participants felt the product matched or exceeded their expectations.



Which of the below statements best represents your thoughts regarding buying TruCBN Softgels now that you've tried it?

Answer: N = 43 (40.19%) of participants indicated they have purchased or will definitely purchase the product.



In a few words, please share why

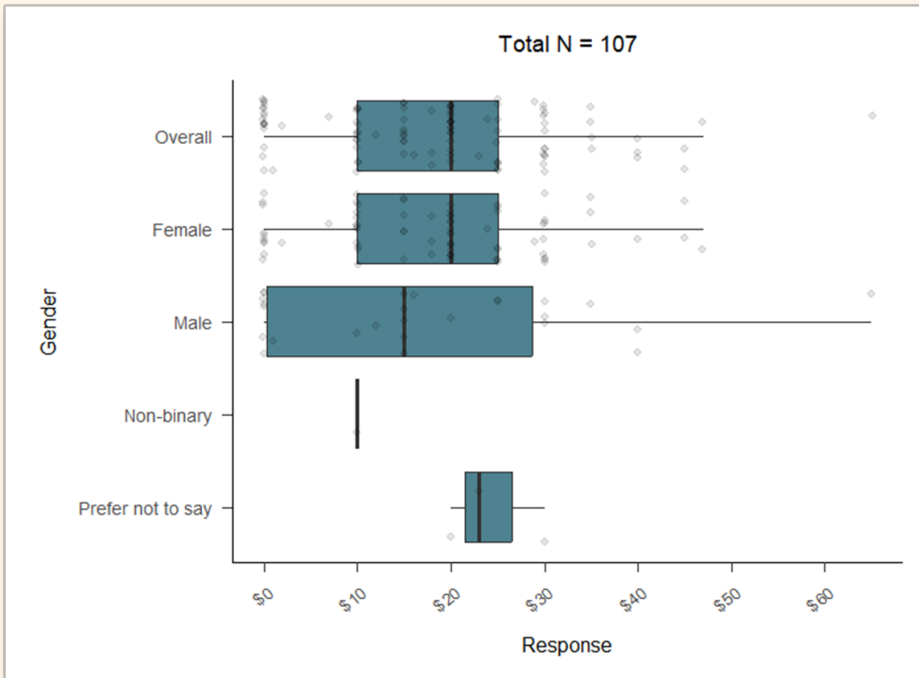
Response	Texts (Undecided on if I'll buy the product)
1	The price is too high
2	I've been using TruCBN softgels for sleep and they've really helped me get better rest. The effects are gentle but effective. Unfortunately, I'm currently unemployed and can't afford to keep buying them right now.
3	It didn't really help me sleep through the night like I thought it would.
4	It did not decrease the time to sleep significantly
5	Financial difficulties
6	It didn't help me to sleep, like I thought it would.
7	It didn't work well for me
8	I'm not sure it was with the price
9	It hasn't helped that much
10	The difference was not noticeable enough for me to purchase the product in the first future.
11	Not sure of the cost...
12	I can't afford it
13	It was helpful but not sure if it was enough to make me continue using it.
14	I woke was still waking up really tired.
15	It didn't help me really at all
16	I do not know the cost.
17	im having money issues right now
18	The cost may prevent me from buying it.
19	Not sure of price yet
20	The product didn't work the way I thought it would.
21	Fear of depending upon it longterm
22	I have no prob with the product I just do not know if there was any affect bad or good.
23	It costs alot
24	Unclear that there is real benefit / value
25	I have many other factors that contribute to my sleep patterns. Although there were some good days while taking the softgels, there where days when nothing worked.
26	I have been pleased with the product and would be open to continuing to take it.
27	It depends on pricing and whether I can find something that works better.
28	I didn't really notice any effects. A few nights I couldn't sleep at all.
29	I think it helped my sleep, but maybe not as much as THC gummy's
30	Need to try a few more things
31	The price.
32	It just didn't help with my pain the way I had hoped.
33	I am on disability due to my back issues so money is tight. I only get \$967 a month
34	It did improve my sleep, but I can't say that it was more than other things that I take periodically, like melatonin.
35	Price
36	Not sure if it is worth the price
37	I sleep pretty well already and have a hard time remembering to take something before bed— but I might keep some on hand to have for tough night or when I fall asleep late
38	Cost

Response	Texts (Undecided on if I'll buy the product)
39	They do not seem to have that big of an impact on helping me fall and stay asleep and I feel I'd have to take at least 2 or maybe even 3 of the capsules to fall and stay asleep. I would buy them if I had the extra money to do so from time to time though.
40	My biggest problem is staying asleep and waking up hours too early for example 4:30am. This did not help with that. I did try taking 2 pills instead of one, but hadca ringing in my ears so I thought I may have taken too much.
41	Haven't looked into price yet
42	Depends on the cost and my finances
43	I need to check how I feel in the coming weeks before deciding
44	Did not really work for me
45	As I do not have alot of extra money to spend an 40\$ a month is a little steep.

Response	Texts (I will not purchase this product)
1	no good no effects
2	Didn't help falling asleep or staying asleep. All it did was cause a major hangover that affected my well being for 2 days
3	Because besides the very first night, this product didn't work for me. And also it gave me a feeling almost as if I was high on weed. By that I mean when I consume weed, I get this numb feeling in my throat and I hate that feeling!!
4	It didn't work for me
5	I truly did not notice a difference when taking it.
6	Every morning after taking the sleep gels I would wake up with a headache so I stopped taking it.
7	Not worth it
8	It didn't work for me
9	I do not feel like it helped
10	Don't do mix for me
11	Didn't work
12	My sleep disorders are so severe that nothing has any effect on them so I was not expecting these to have any expect and they didn't have any effect. Nothing affects my sleep positively. So I really wasn't anticipating any benefit from it and I didn't get any benefit from it so you know that's okay
13	It really didn't make a difference for me personally
14	Inconsistent effects
15	There was not significant changes in my sleep
16	It doesn't seem to be working
17	It didn't work
18	My body doesn't seem to react at all to this product. I'm very sad about that. I was really looking forward to sleeping better and through the night, but that didn't happen.
19	No significant improvement

How much would you pay for TruCBN Softgels?

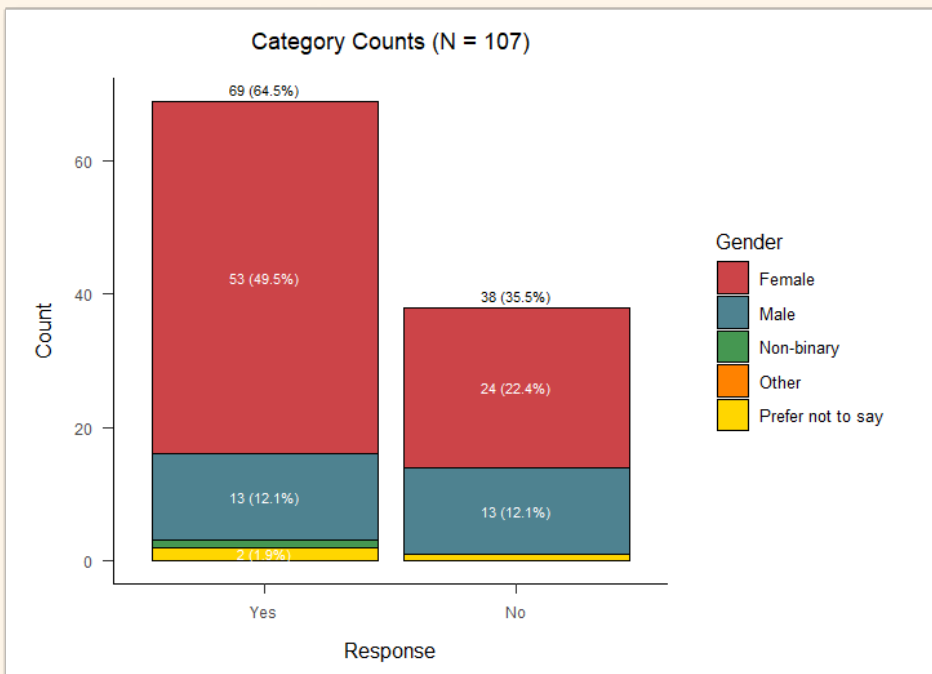
Answer: Participants reported they would pay, on average, \$18.36 (SD = \$12.66) for the product.



The boxplot displays the minimum values, first (lower) quartile (left side of box), median (dark line in middle area of box), third (upper) quartile (right side of box), and maximum non-outlier values

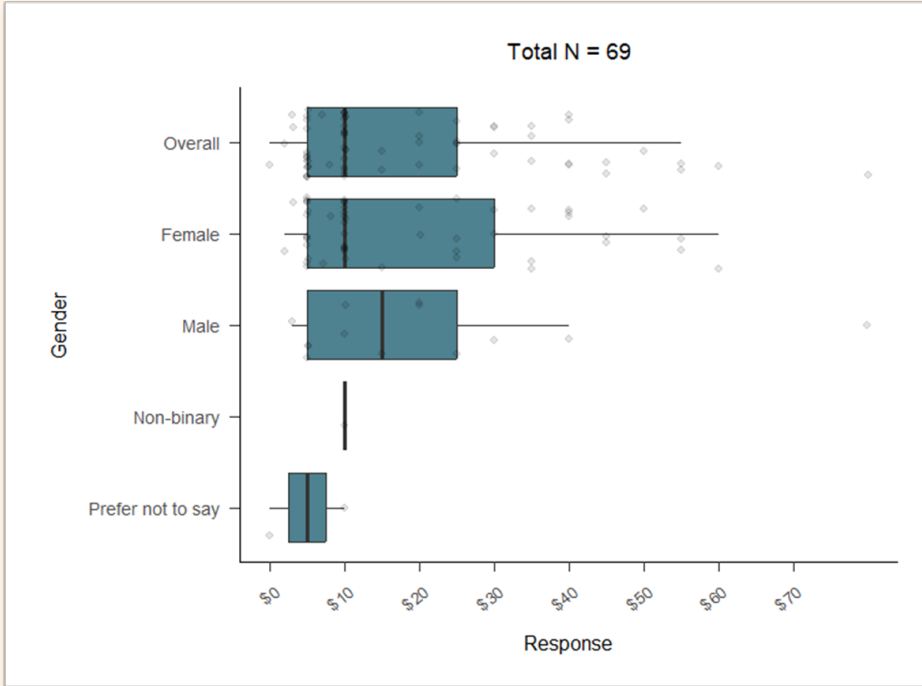
Would you be willing to pay more for TruCBN Softgels compared to other sleep products if you were shown scientific data on positive/beneficial effects and outcomes it provides?

Answer: N = 69 (64.49%) of participants responded "Yes".



How much more would you be willing to pay?

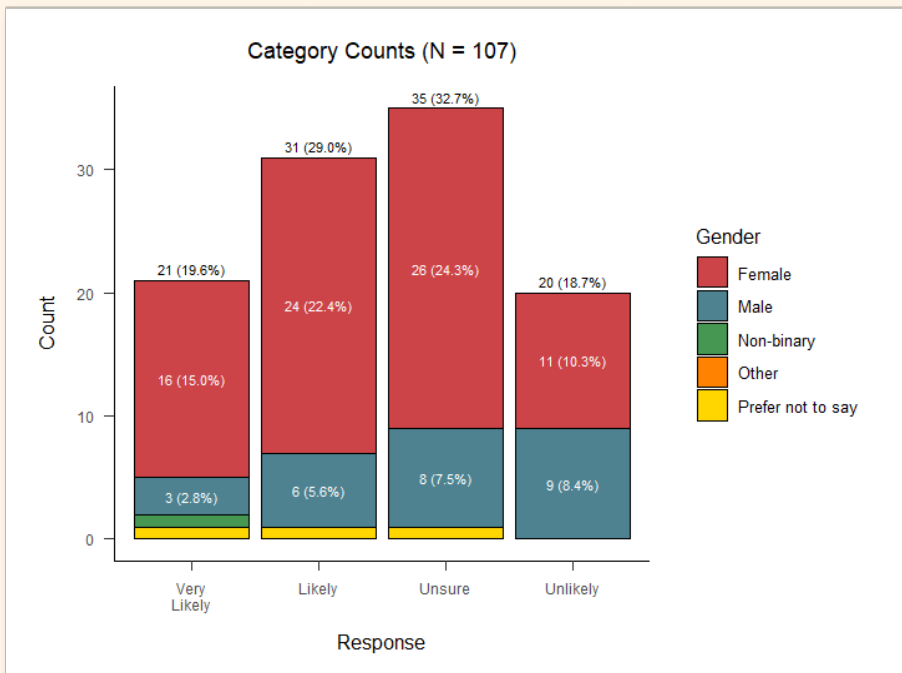
Answer: Participants reported they would pay, on average, \$18.45 (SD = \$16.93) much more for the product.



The boxplot displays the minimum values, first (lower) quartile (left side of box), median (dark line in middle area of box), third (upper) quartile (right side of box), and maximum non-outlier values.

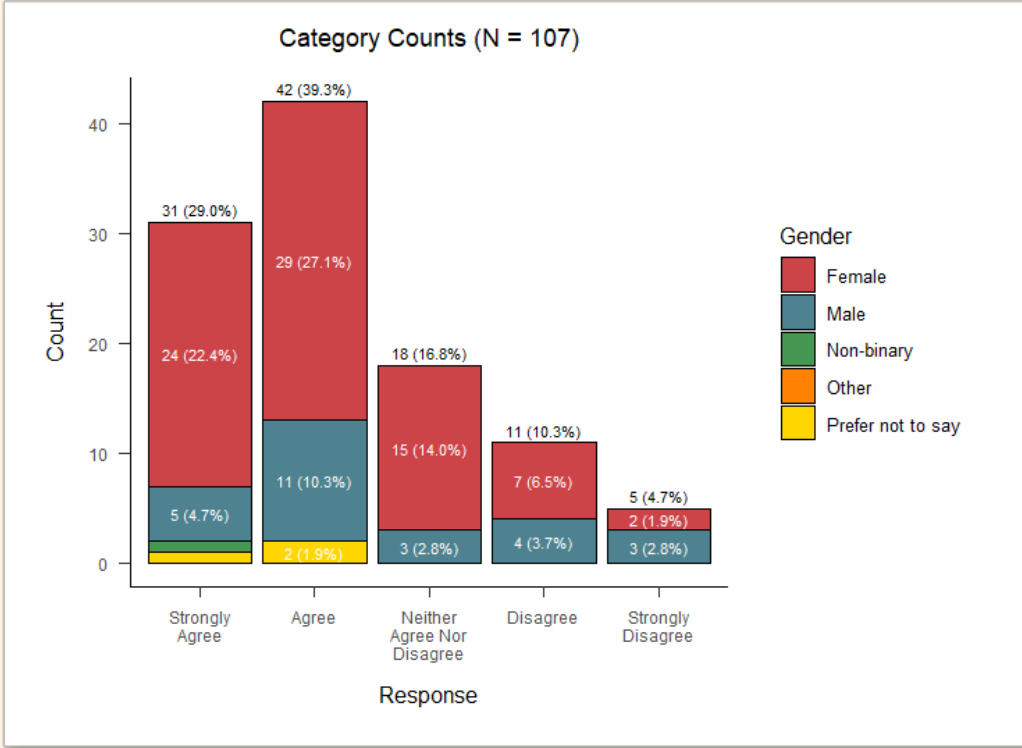
Based on your experience, how likely are you to continue taking FloraWorks's TruCBN Softgels after this Sleep Study?

Answer: N = 52 (48.6%) of participants were likely or very likely to continue using the product.

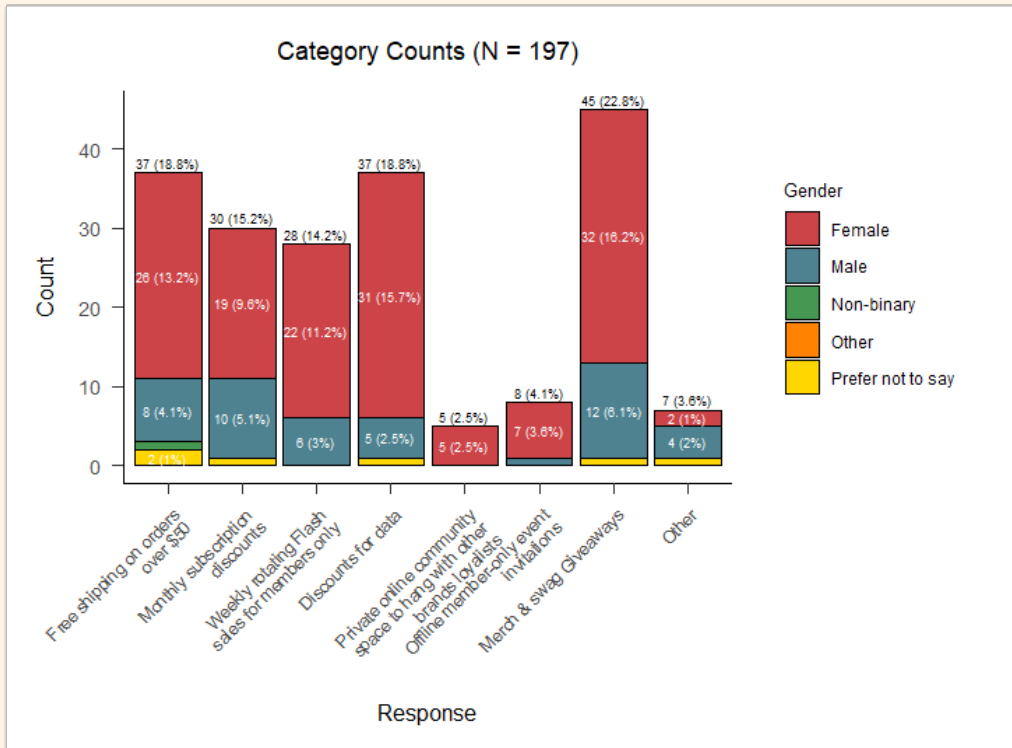


How much do you agree with the following statement regarding your use of FloraWorks's TruCBN Softgels: "I will recommend FloraWorks's TruCBN Softgels to others."

Answer: N = 73 (68.22%) of participants strongly agree or agree with the statement.



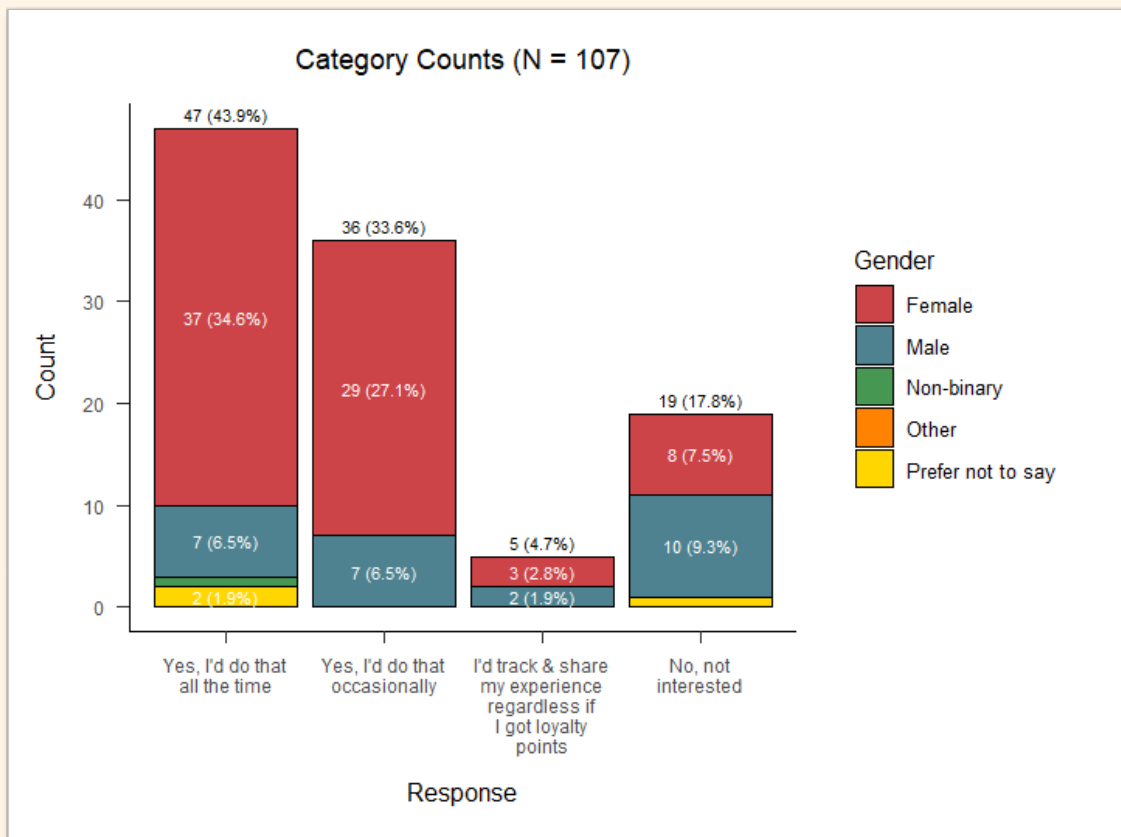
What type of loyalty program perks are most interesting to you?



Response	Other type of loyalty program perks
1	Free products
2	nothing
3	Free product
4	Free shipping
5	Don't know
6	Free
7	None

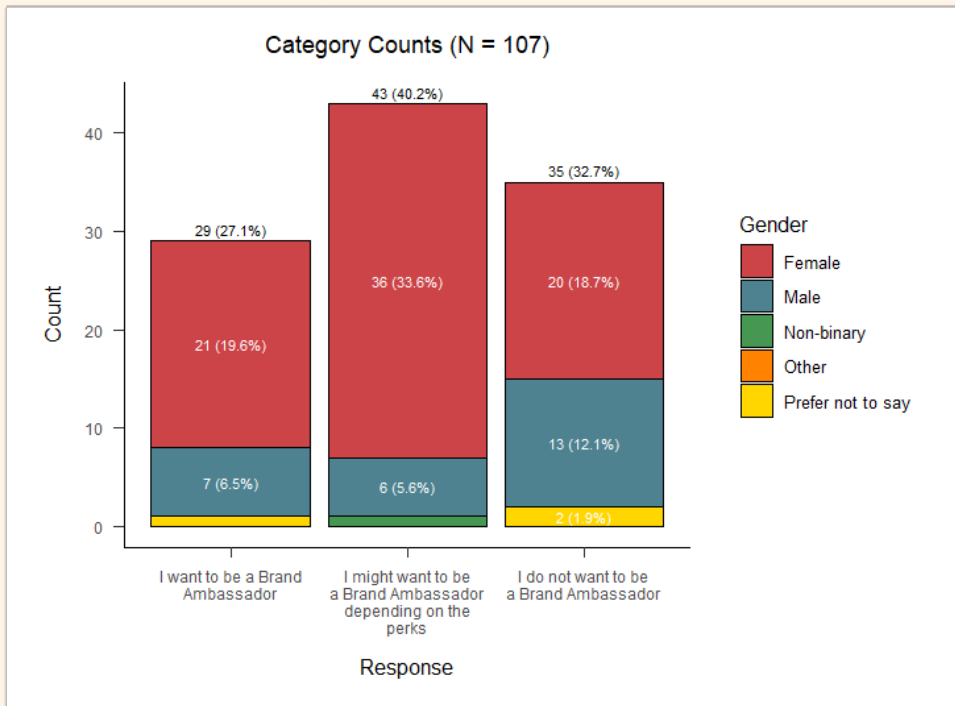
In traditional loyalty programs, you earn points based on the amount of dollars you spend with the brand. What if you could earn loyalty points by tracking and sharing your product use and experience every time you used the product. Would you do that?

Answer: N = 88 (82.24%) of participants were interested in loyalty points.



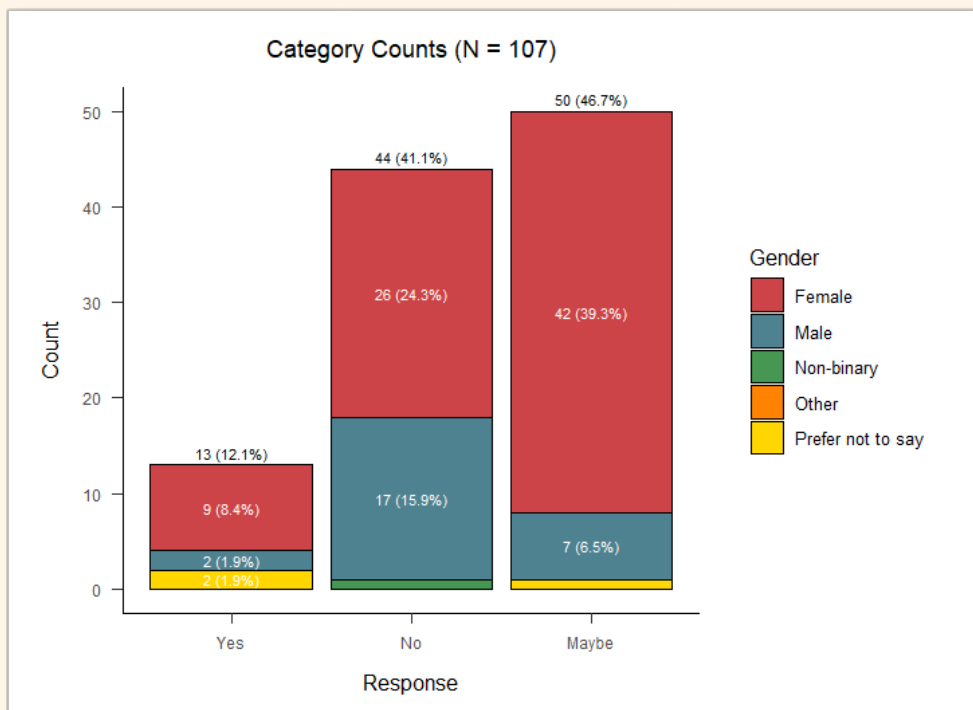
Which of the following best describes your opinion regarding being a Brand Ambassador for FloraWorks?

Answer: N = 72 (67.29%) of participants want or might want to be a Brand Ambassador.



If you could buy your own Personal Data Report from this study, that shows your results compared to everyone else in the study, would you want to do that?

Answer: N = 63 (58.88%) of participants responded “Yes” or “Maybe” when asked whether they would buy their own Personal Data Report from this study.



PRODUCT REVIEWS

Response	FloraWorks's TruCBN Softgels Reviews
1	These softgels are easy to use and left me feeling super chill before going to bed. Only side effect for me was mild dry mouth.
2	TruCBN softgels work great for helping me fall asleep and stay asleep through the night. No grogginess in the morning and zero cannabis taste, which I really appreciate.
3	TruCBN Softgels are very effective. They are easy to digest and work fast.
4	They definitely helped me fall asleep faster and reduce my anxiety but did not help me sleep through the night.
5	While I experienced only a slight change in my sleep quality, I did notice a significant improvement in my overall mood.
6	TruCBN Softgels are great! They are easy to swallow, 100% tasteless, and they work!!!
7	nasty and ineffective
8	They were easy to take. I slept better when I took them.
9	No
10	I think if I took more than I would have, maybe slept better. I did take two softgels it made my body ache
11	I'm not sure of what to say about this product except it didn't work for me and that was disappointing because I had high hopes for this product.
12	This product has helped me sleep more intensely. Before it was like I was never slept. The REM sleep was better and more restful. It did not fully kill the pain, but it helped. I wake up less after taking these for a while and go back to sleep much faster
13	These TruCBN Softgels have helped me get better quality sleep the past few weeks. They are easy to take with no after taste and put me in the best calming state for a perfect nights rest.
14	They didn't work well for me , I usually took about 3 when I was taking them.
15	I really liked them
16	Helped me achieve longer deep sleep and wake up less as well. Very effective
17	FINALLY!! A natural product to help me sleep that ACTUALLY WORKS!! No harsh chemicals or crazy side effects. 10/10 I would definitely recommend and already have a couple people! Thank you Floraworks and TruCBN
18	Works amazing. I could tell a huge difference in sleep and overall quality of life in only a week of taking the product.
19	They did not work for me.
20	They really haven't improved my sleep quality a great deal. I'm hoping they will continue to improve my sleep quality somewhat
21	The softgels were tasteless and easy to get down. I noticed little difference between taking them and not taking them.
22	I did not fin a significant benefit. My sleep patterns did not change or improve but also did not get worse.
23	They did not work for me. I wouldn't see any difference in my sleep when I took them and I would wake up with a headache the next morning after taking them.
24	The cbn softgels were much better than I expected. I was afraid of feeling bad afterwards. I did have to take 2 for best effect.
25	Fantastic product. Definitely do best job of any product I've ever used and helping me sleep

Response	FloraWorks's TruCBN Softgels Reviews
26	Helped sleeping thru night
27	They work really well.
28	This product helped me stay asleep better. When I woke up during the night, I fell right back asleep.
29	I was unsure of the effectiveness of this product
30	They didn't really work to help with my sleep nothing I have tried does
31	Easy product to take. Makes you drowsy fairly quickly.
32	No grogginess, felt clear minded. Easy to take and look forward to a better night of rest.
33	.
34	I enjoyed taking them. Perceived positive benefits
35	TruCBN Softgels did not work for me.
36	TruCBN keeps me asleep through the night which has been an issue for me for a long time. I not only wake up less often but I go back to sleep quickly if I do wake up!
37	I found that they helped me with anxiety an pain an with my sleep alot after taking them for a few days it was amazing
38	TruCBN was certainly helpful in allowing me to get to sleep faster and sleep more soundly through the night.
39	Nothing specific comes to mind right now
40	Works great with no hangover, was easier to fall back asleep after waking. Awesome product.
41	These softgels helped me sleep soundly with no side effects. I am so grateful that I had the opportunity to try them.
42	I enjoyed using the products and would like to try other products from this brand.
43	To be honest, I do not think it helped me at all. However, this was the worst time to try these as I had surgery during the testing phase.
44	This product works well if taken correctly. It works only if you are not in pain.
45	It's truly great for a man like me, I quit because weed made me paranoid, this product truly didn't make me paranoid at all
46	FloraWorks TruCBN softgels improved my sleep quality and overall energy level. I made the right decision choosing to try the softgels. I thought it would taste bad or not deliver results but those doubts were soon gone after sleeping longer and waking up better than I had in months.
47	I like the study. I do not know if it was helpful to you or to me.
48	They helped with anxiety
49	Easy to use
50	FloraWorks's TruCBN Softgels can help you fall asleep and calm your nervous system for a better night's sleep.
51	Probably one of the better sleep products I have used over the years. It just felt like a healthy experience.
52	Florawork's TruCBN soft gels helped me get better more consistent sleep while helping to manage pain that would wake me up at night. There were no lasting effects of the soft gels once I woke in the morning I would recommend to others.
53	It seemed to work for me.
54	I had my doubts but my sleep has been better since taking it. I feel restored when I wake up and my mood and energy is constant throughout the day.

Response	FloraWorks's TruCBN Softgels Reviews
55	Great product I had to take 3 due to my weight
56	I found that one softgels was not enough so I increased the dose to 2 softgels. That's worked very well for me.
57	This product improved my ability to wake up less during the night. I was also able to fall asleep faster than usual.
58	I think it helped my sleep quality and ability to fall asleep easier. I'm a very poor sleeper so I did see improvements
59	Probably the best sleep I've had in quite some time
60	These are magic gels! They taste clean and not at all like cannabis but they work amazingly well. They make one feel calm, stress and pain free within an hour making it easy to fall asleep and stay asleep peacefully.
61	I enjoyed having something to take when I needed a little help with my sleep.
62	Florawork's TruCBN soft gels were subtle, yet effective. I slept so well, yet there was zero "groggy-ness" when I woke up- it also lightened up my mood in the daytime.
63	These well packaged gel pills where easy to open and swallow. TruCBN did help my body fall asleep and was an incentive for my brain to fall back asleep and stay asleep.
64	Worked for the most part
65	The TruCBN softgels really helped me get to sleep! And I stayed asleep. A try miracle!
66	I really enjoyed taking this product!
67	I thought it helped my sleep, just not as much as I had hoped for.
68	This worked well and quickly. I did experience less pain and more sleep then with out the product.
69	They were ok but still had trouble staying asleep. The gels didn't kick in soon enough for bedtime.
70	This product was easy to take with no side effects. For my first time ever consuming anything cannabis related I was pleasantly surprised.
71	I did feel an improvement in my sleep quality.
72	They worked really well
73	I'm sure they will work for others but didn't for me
74	Good
75	Good product that actually does something, effective dosage and works well.
76	This product truly exceeded my expectations for helping me fall asleep and stay asleep. For anyone like me with severe Insomnia, I generally sleep an average of 3 night a week, taking this product in a 2-3 softgel dosage was a true miracle and there was a massive difference between not taking FloraWorks TruCBN Softgels and the night I took it- I am a True believer in this womerful life altering product!
77	Since using this product I have noticed a significant impact on my sleep quality. I have a busy schedule and significant stressors that affect my sleep, and any change is noticeable. I am a big fan of this product already.
78	They do not work. They have no effect. They don't do anything they they're just they're same as not taking them
79	They helped me sleep through the pain. And I only woke up once a night with it being real easy to fall back to sleep easily without any pain.
80	I personally didn't experience any difference while taking them versus not. I would prefer an actual cannabis product that contains cbn in it for a full effect. I will however recommend them to my mother who has an issue with sleep and she doesn't consume any cannabis. I appreciate you allowing me the opportunity to try them..

Response	FloraWorks's TruCBN Softgels Reviews
81	Didn't have much effect on me. Sometimes made me feel relaxed but inconsistent
82	I can def see an improvement in feeling refreshed the day after. I feel like it's also helped me maintain stable mood over very busy couple of weeks.
83	These pills are little miracles. My sleep is so much better when I take them.
84	This product didn't help me much
85	This product works way better than expected and with little to no side effects. I definitely recommend it for better sleep!
86	As Someone with pretty good sleep who does not take medication at night, I was surprised to see them my sleep consistency had room for improvement but taking this — it definitely did! Even on vacation in a thin walled room I slept through the night and woke up feeling refreshed .
87	I had longer and deeper sleep, and I woke up less than I normally do
88	Worked great. Very good product.
89	I fell asleep much easier, and stayed asleep. My sleep quality was better using the product.
90	The product definitely works for a good night of sleep and has the added benefit of energy the following day. I appreciate not being drowsy or feeling medicated the morning after.
91	In my case the product is not working. I have never used any kind of sleep aid previously. This product has only shown any results when taken in doses of 2 pills then it leaves me feeling like I'm drunk in the morning when I wake.
92	It works well. Stayed asleep longer
93	I really liked that these TruCBN Softgels were in a tasteless and easy to take format. They kicked in usually within an hour and helped me feel more relaxed to be able to drift off to sleep easier most nights.
94	It didn't make any difference for me.
95	Thank you
96	I assumed being soft gels that they were supposed to be swallowed. Otherwise they would be called gummies.
97	TruCBN soft gels did not work for me. If they did work for someone else that would be fabulous.
98	They definitely work and I would definitely recommend it to others that may have trouble sleeping.
99	Very smooth and relaxing sleep sedative that doesn't leave you hungover or "high"
100	Did not really work for me these were
101	surprisingly effective from the start. my bedtime routine became more relaxing and I was able to fall asleep faster and got better sleep. on missed nights it was obvious the next day, I didn't feel as rested. simple and effective for those with trouble sleeping
102	It seems to be more effective if taken at least an hour before bed vs right before bed.
103	These work amazingly! I haven't slept this good since before I became a parent. Great product!
104	Did not significantly improve my sleep
105	It works really well with none of the terrible taste of cannabis.
106	Works great. Improved my sleep.
107	Simple and tasteless.

Technical Analysis Details

All analyses were performed in R (version 4.5.1; R Core Team, 2025).

The primary workflow utilized a suite of R packages for data wrangling, stats modeling, visualization, and tables. Core packages included: moreBetter (version 0.1.2), tidyverse (version 2.0.0), dplyr (version 1.1.4), ggplot2 (version 4.0.0), tidyr (version 1.3.1), readr (version 2.1.5), stringr (version 1.5.2), lubridate (version 1.9.4), lme4 (version 1.1.37), emmeans (version 1.11.2.8), ggeffects (version 2.3.1), modelsummary (version 2.5.0), flextable (version 0.9.10), knitr (version 1.50), scales (version 1.4.0).

To test the impact of product use over time, while accounting for data dependencies (i.e., multiple observations from the same participant), longitudinal linear (and generalized/ordinal) mixed-effects models were used. These models allow for understanding overall trends while accounting for participant differences.