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Usage Funnels with Warby Parker

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Step 1: What columns does the surveys table have?

```
SELECT * FROM survey LIMIT 10;
```

This confirms the available fields we can use for analysis

Query Results

question	user_id	response
1. What are you looking for?	005e7f99-d48c-4fce-b605-10506c85aaf7	Women's Styles
2. What's your fit?	005e7f99-d48c-4fce-b605-10506c85aaf7	Medium
3. Which shapes do you like?	00a556ed-f13e-4c67-8704-27e3573684cd	Round
4. Which colors do you like?	00a556ed-f13e-4c67-8704-27e3573684cd	Two-Tone
1. What are you looking for?	00a556ed-f13e-4c67-8704-27e3573684cd	I'm not sure. Let's skip it.
2. What's your fit?	00a556ed-f13e-4c67-8704-27e3573684cd	Narrow
5. When was your last eye exam?	00a556ed-f13e-4c67-8704-27e3573684cd	<1 Year
3. Which shapes do you like?	00bf9d63-0999-43a3-9e5b-9c372e6890d2	Square
5. When was your last eye exam?	00bf9d63-0999-43a3-9e5b-9c372e6890d2	<1 Year
2. What's your fit?	00bf9d63-0999-43a3-9e5b-9c372e6890d2	Medium

Step 2: How many responses per question?

```
SELECT question,
COUNT(DISTINCT(user_id)) AS
unique_responses
FROM survey
GROUP BY question;
```

Query Results

question	unique_responses
1. What are you looking for?	500
2. What's your fit?	475
3. Which shapes do you like?	380
4. Which colors do you like?	361
5. When was your last eye exam?	270

Step 3: Completion Rates

- Question 5 has the lowest completion rate
- Possible reason: question 5 is particularly personal and not clearly relevant to selecting clothes

Survey Question	Number of Unique Responses	% of Total
1	500	25.2%
2	475	23.9%
3	380	19.1%
4	361	18.2%
5	270	13.6%

A/B Test

Step 4. Data in Warby Parker‘s Purchase Funnel

A: 50% of the users will get **3** pairs to try on
B: 50% of the users will get **5** pairs to try on

Research question: whether users who get more pairs to try on at home will be more likely to make a purchase.

Table Name	Table Columns
Quiz	user_id, style, fit, shape
Home_try_on	user_id, number_of_pairs, address
Purchase	user_id, product_id, style, model_name, color, price

Step 5: Join tables to create table „joined“

```
WITH joined AS (
    SELECT DISTINCT
        SUBSTR(q.user_id, 1, 8) AS user_id,
        CASE
            WHEN h.user_id IS NOT NULL THEN
'True'
            ELSE 'False'
        END AS is_home_try_on,
        CASE
            WHEN h.number_of_pairs = '' OR
h.number_of_pairs IS NULL THEN 'NULL'
            ELSE CAST(h.number_of_pairs AS
INTEGER)
        END AS number_of_pairs,
        CASE
            WHEN p.user_id IS NOT NULL THEN
'True'
            ELSE 'False'
        END AS is_purchase
    FROM quiz q
    LEFT JOIN home_try_on h
        ON q.user_id = h.user_id
    LEFT JOIN purchase p
        ON p.user_id = q.user_id
)
```

First 10 rows of the query result:

Query Results

user_id	is_home_try_on	number_of_pairs	is_purchase
4e8118dc	True	3	False
291f1cca	True	3	True
75122300	False	NULL	False
75bc6ebd	True	5	False
ce965c4d	True	3	True
28867d12	True	5	True
5a7a7e13	False	NULL	False
0143cb8b	False	NULL	False
a4ccc1b3	True	5	False
b1dded76	True	3	False

Step 6: Actionable Insights

Overall Conversion Rate

- 49.5% of all users purchased something

```
SELECT
    ROUND(100.0 * SUM(CASE WHEN
is_purchase = 'True' THEN 1 ELSE 0
END) / COUNT(*), 2) AS
overall_conversion_rate_pct
FROM joined;
```

Which group - A or B - converts better?

```
SELECT
    number_of_pairs,
    COUNT(*) AS users,
    SUM(CASE WHEN is_purchase = 'True'
THEN 1 ELSE 0 END) AS purchasers,
    ROUND(100.0 * SUM(CASE WHEN
is_purchase = 'True' THEN 1 ELSE 0 END)
/ COUNT(*), 2) AS conversion_rate_pct
FROM joined
WHERE number_of_pairs IN (3, 5)
GROUP BY number_of_pairs
ORDER BY number_of_pairs;
```

Users who tried on 5 pairs had a higher conversion rate than those who received only 3 pairs (79% vs 53%)

Query Results

number_of_pairs	users	purchasers	conversion_rate_pct
3	379	201	53.03
5	371	294	79.25

How many users tried clothes on at home?

```
SELECT
    is_home_try_on,
    COUNT(*) AS users
FROM  joined
GROUP BY is_home_try_on;
```

750/1000 => 75% of users tried at home

Query Results	
is_home_try_on	**users**
False	250
True	750

Conversion rate from try-on purchase

```
SELECT
    is_home_try_on,
    COUNT(*) AS users,
    SUM(CASE WHEN is_purchase = 'True'
THEN 1 ELSE 0 END) AS purchasers,
    ROUND(100.0 * SUM(CASE WHEN
is_purchase = 'True' THEN 1 ELSE 0 END)
/ COUNT(*), 2) AS conversion_rate_pct
FROM joined
GROUP BY is_home_try_on;
```

- 66% of users who try on at home also purchase
- No users who do not try on at home purchase

 Trying on at home is strongly associated with purchases and without it users are unlikely to buy

Query Results

is_home_try_on	users	purchasers	conversion_rate_pct
False	250	0	0.0
True	750	495	66.0

Average number of pairs by purchase outcome

- Do people who try more pairs buy more often?

```
SELECT
    is_purchase,
    ROUND(AVG(number_of_pairs), 1) AS
avg_pairs
FROM joined
WHERE number_of_pairs IS NOT NULL
GROUP BY is_purchase;
```

Query Results

is_purchase	avg_pairs
False	1.8
True	4.2

- If a user purchases clothes, they tend to try more pairs