

Taptic

A Tactile Redirection Tool for BFRBs

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DESIGN THINKING PROCESS

Empathize

Learned about BFRBs through research and casual conversations. Focused on people with ADHD, anxiety, or sensory needs



Ideate

Explored multiple concepts and narrowed it down to a tactile finger strip with four texture options.



Test

Had 12 adults test all textures. Collected surveys and feedback to assess comfort and effectiveness



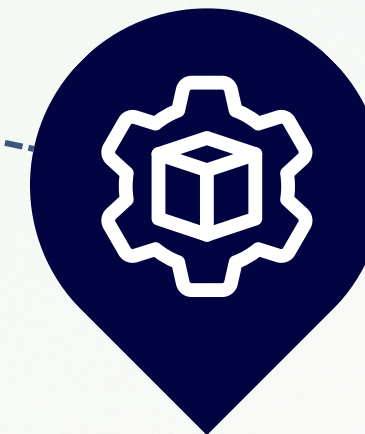
Define

Identified the core problem: few discreet, accessible tools for habit redirection



Prototype

Built 4 texture versions using silicone, hot glue, Velcro, and tape



Problem & Purpose

- BFRBs like nail biting are unconscious habits tied to anxiety, ADHD, or sensory needs
- Current tools are limited or ineffective.
- TapTic uses tactile textures to discreetly redirect these behaviors.
- This project tested its comfort and effectiveness.



Supporting Literature

1

**Fidgeting as a form
of self-regulation**

Sipes et al., 2020;
Son et al., 2024

2

**Tactile input helps
regulate BFRBs**

Snorrason et al., 2015;
Müller & Fritz, 2020

3

**Haptic feedback
improves focus and
habit control**

Jeong & Paik, 2023;
Zheng et al., 2019

Solution

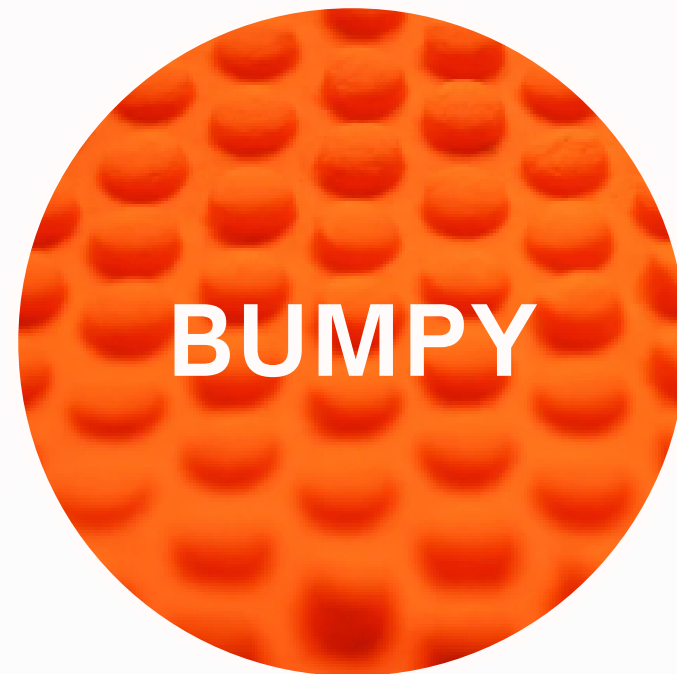
**Adults who suffer from ADHD and BFRBs need a
wearable, tactile aid to divert behavior away
from disruptive fidgeting and picking.**

Texture Exploration



SMOOTH

Created from flat silicone strips, this texture offered minimal stimulation



BUMPY

Formed by dotted glue mounds, this mid-level texture gave a balanced tactile experience



RIDGED

Made using raised glue lines, this texture provided high tactile engagement



SPIKY

Built using Velcro-style adhesive strips, this texture introduced sharper, pointed sensations

Product Overview

SMOOTH



RIDGED



BUMPY



SPIKY





Testing

Phase 1 (6 participants)

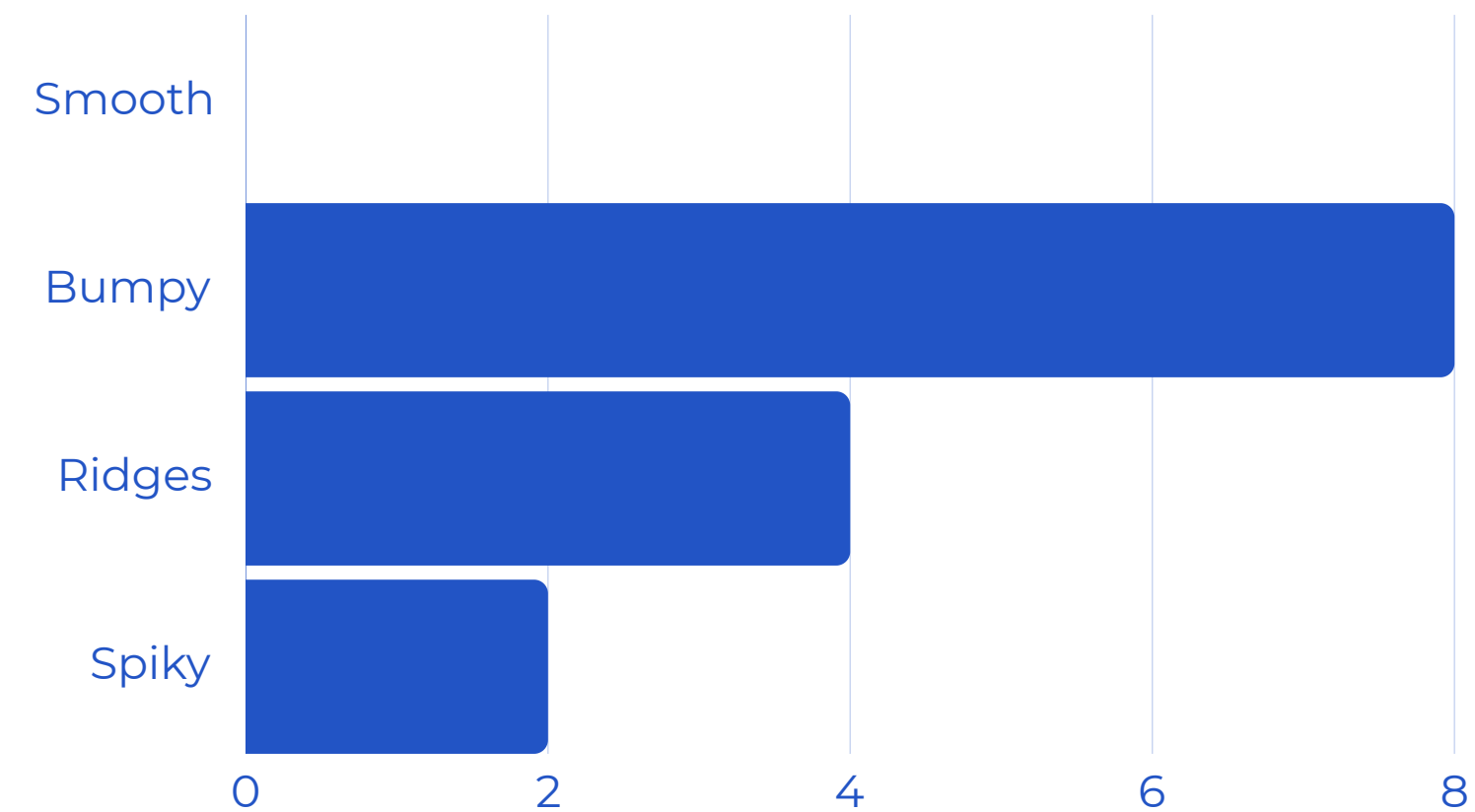
Step 1	—————	Demographic survey
Step 2	—————	Give participant all textures and time how much time they spent with each
Step 3	—————	Experience Survey

Phase 2 (6 participants)

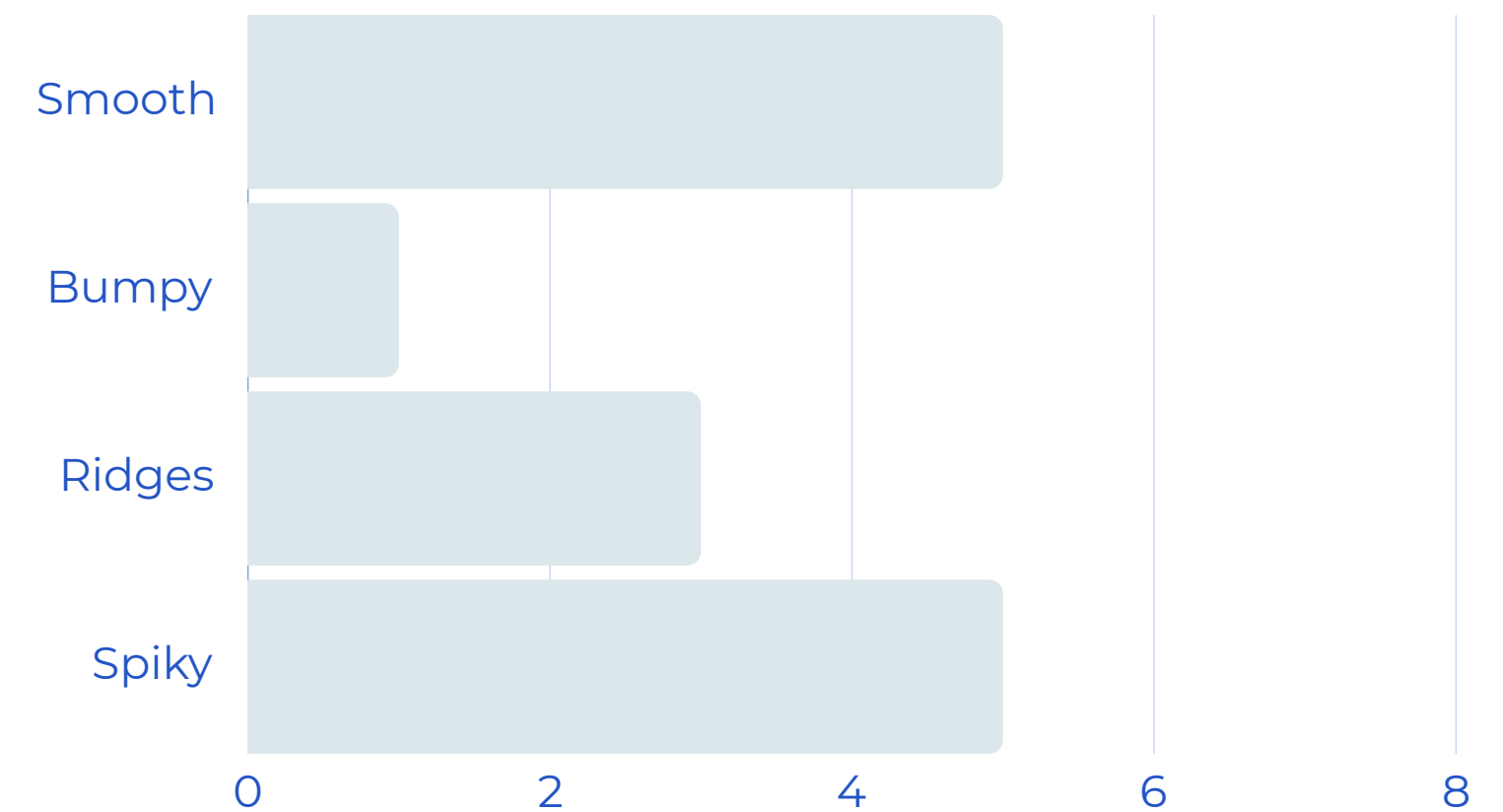
Step 1	—————	Demographic survey
Step 2	—————	Give participant one texture at a time: record video for timing
Step 3	—————	Experience Survey

Texture Preferences

Favorite



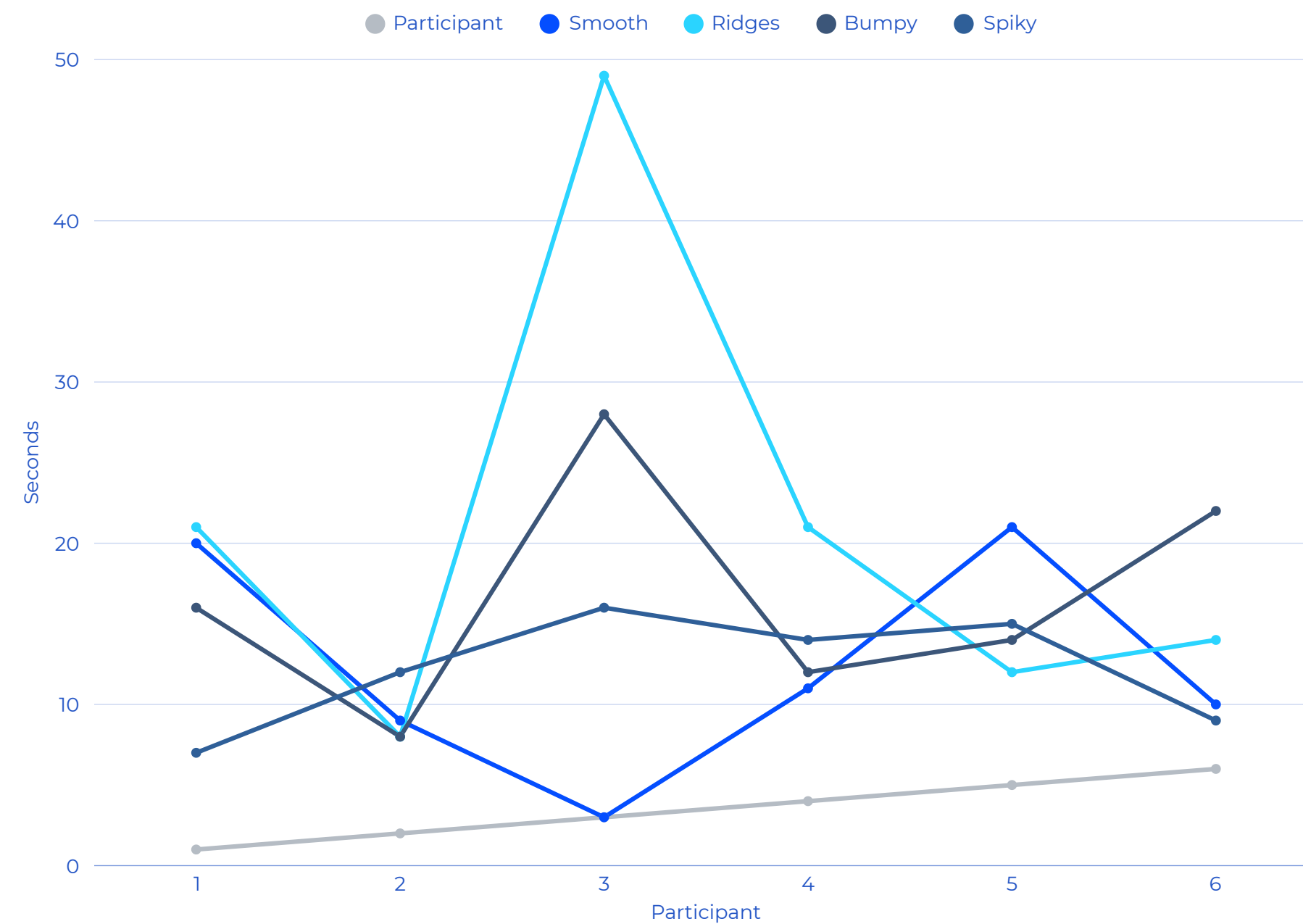
Least Favorite



Testing



Timing



Averages

12.3

Smooth

20.8

Ridges

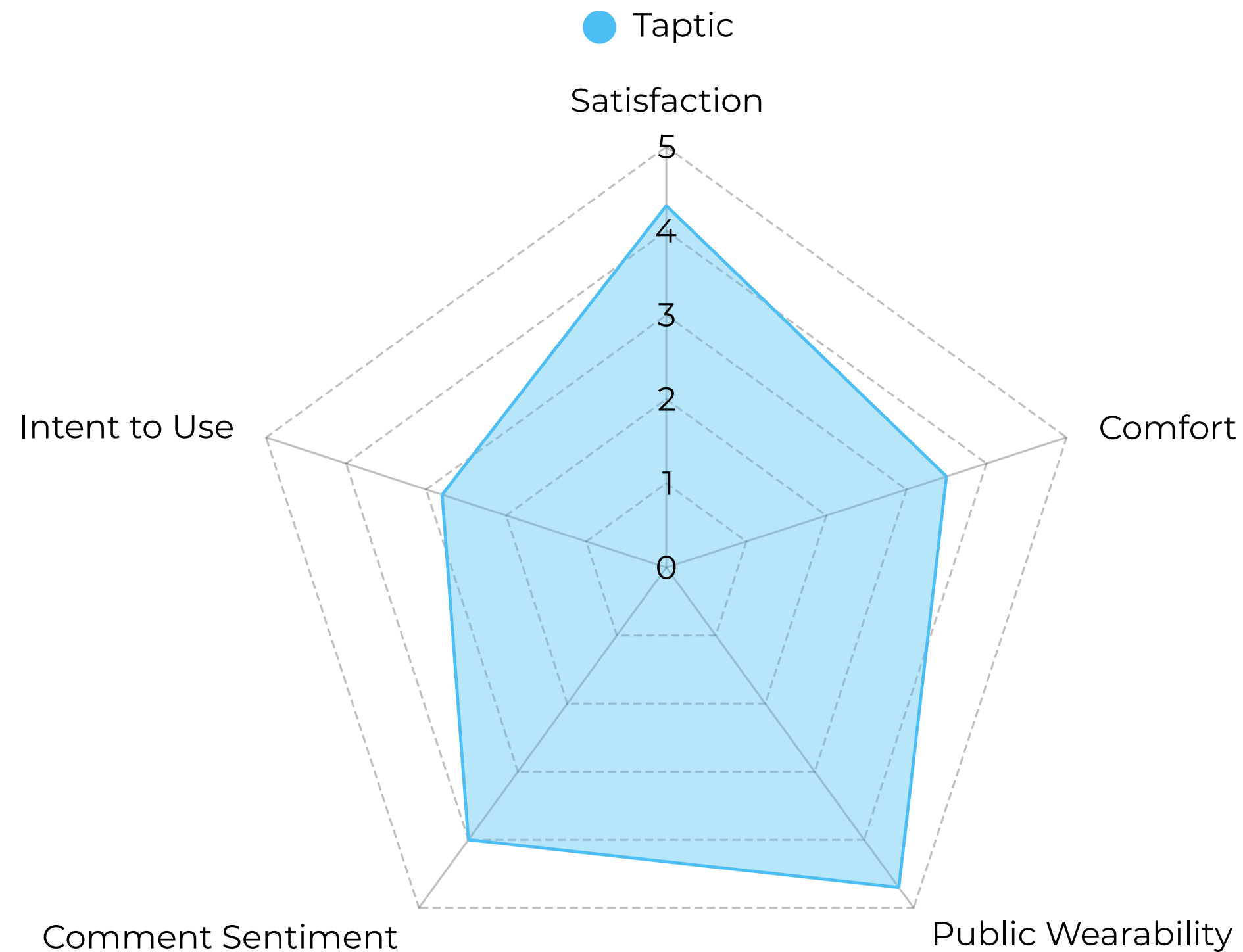
16.7

Bumpy

12.2

Spiky

Results Overview



Conclusion

TapTic's tactile prototype received favorable feedback, with "bumpy" as the most preferred texture. Though participants spent the most time with "ridges," this didn't fully align with survey responses, suggesting uncertainty. While there's some link between usage time and preference, timing alone isn't a reliable measure of satisfaction, indicating a need for further research.

References

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