

**Abstract Title:**

ChatGPT vs Google: A Comparison of Accuracy, Comprehensiveness, and Conciseness when Answering Common Questions Regarding Carpal Tunnel Syndrome

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**Introduction:** Artificial intelligence (AI) is a rapidly expanding technological advancement that enables computers to mimic human intelligence. Popular AI systems, like ChatGPT, can be accessed by anyone and used to generate humanlike answers to questions. Patients often turn to the internet with medical questions before seeking help from a medical provider, so this study sought to determine whether ChatGPT or a standard google search provides more accurate, complete, and concise answers to the most common questions patients have about carpal tunnel syndrome.

**Methods:** SearchResponse.io, a website that stores data on google search patterns, was queried to determine the five most asked questions regarding carpal tunnel syndrome. These questions were then searched on Google, and the answers from the first five tabs were downloaded. The response generated by ChatGPT (version 3.5) to each question was also downloaded. Three fellowship trained orthopedic hand surgeons then blindly graded the answers using Likert scales to assess accuracy, completeness, and conciseness.

**Results:** The Likert scores for all Google answers were averaged together separately for accuracy, completeness, and conciseness. These were compared against the average of the Likert scores for ChatGPT, revealing no statistically significant ( $p>0.5$ ) difference in accuracy or completeness between google and ChatGPT but a higher conciseness score for ChatGPT that was statistically significant ( $p=0.007$ ).

**Conclusion:** ChatGPT and Google provide answers to the five most asked questions about carpal tunnel syndrome that are similar in accuracy and completeness, but ChatGPT answers are more concise. ChatGPT version 3.5, being freely accessible to the general public, is therefore a good resource for patients seeking high quality answers to a specific medical question regarding carpal tunnel syndrome.

### Average Likert Scale Scores, ChatGPT vs Google

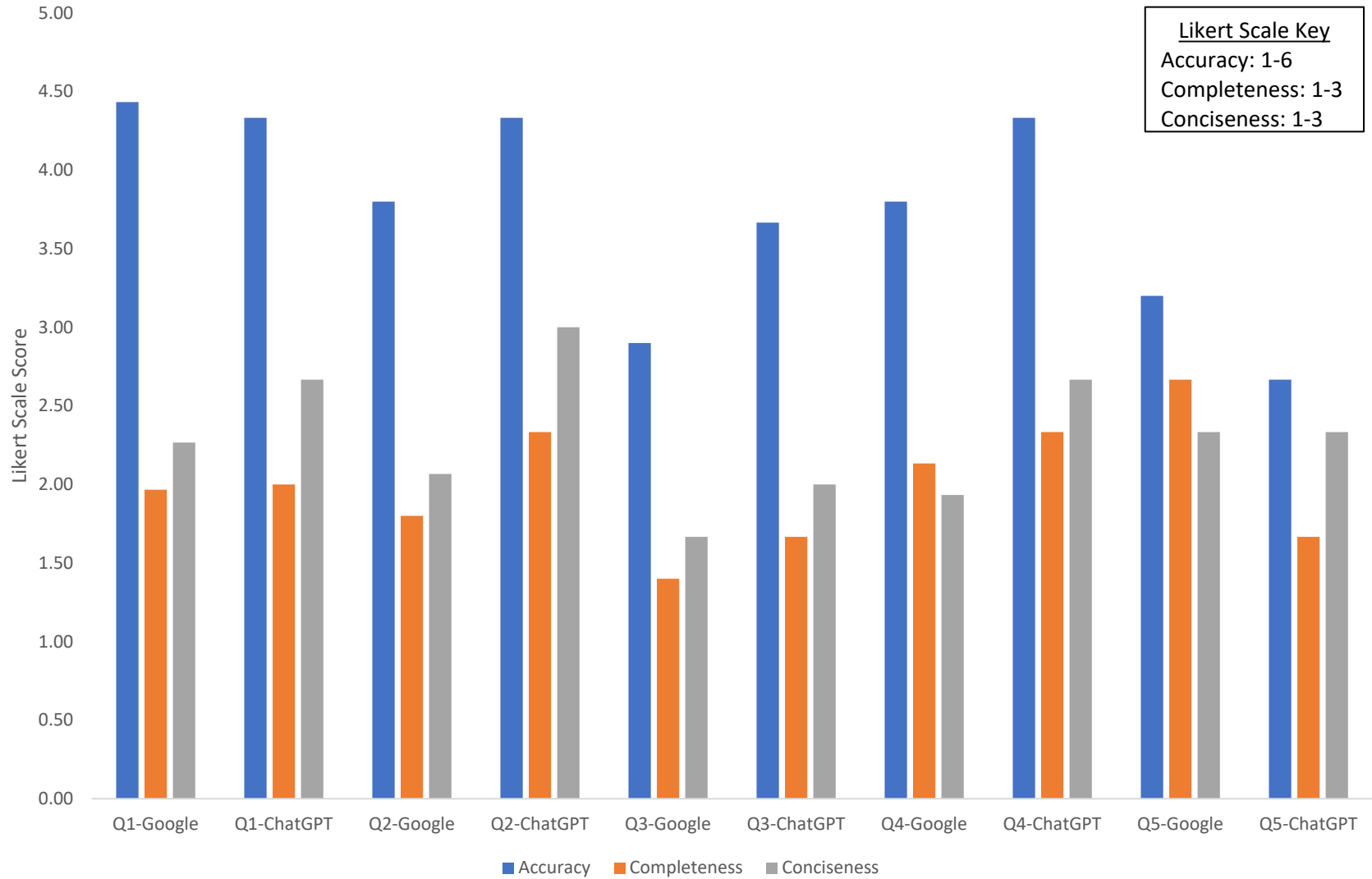


Figure 1. Likert scale scores, averaged from the ratings of three surgeons, for the accuracy, completeness, and conciseness of the answers produced by Google or ChatGPT for the five most commonly asked questions about carpal tunnel syndrome (Q1-Q5).