CORRESPONDENCE

An Assessment to Test the Ability of ChatGPT 3.5 to Solve the Clinical Cases in National Physical Therapy Examination (NPTE)

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Dear Editor,

ChatGPT, developed by OpenAI, is an advanced language model designed to generate coherent and contextually relevant human-like text based on the input it receives [1]. In the healthcare sector, ChatGPT holds the potential to assist in various applications, providing information, answering queries, and offering insights into medical and clinical scenarios [2]. In physiotherapy, ChatGPT could serve as a valuable resource for delivering information on rehabilitation exercises, treatment protocols, and general guidance for both physiotherapists and patients [3]. The primary goal of this assessment is to evaluate ChatGPT's capability to solve clinical cases derived from the National Physical Therapy Examination (NPTE). By subjecting the model to multiple-choice questions related to physiotherapy, the study aims to gauge the accuracy and limitations of ChatGPT in addressing specific clinical scenarios.

ChatGPT 3.5 was used for this assessment. Twenty-five clinical cases were selected from the "300 NPTE Questions and Answers" by Peter Stringer [4]. All cases involved multiple-choice questions with four options. These questions were presented to ChatGPT, and the generated responses were then cross-checked against the provided answer key. ChatGPT exhibited a commendable accuracy rate of 72%, correctly answering 18 out of 25 questions. However, noteworthy discrepancies were observed in one case involving muscle testing for S1 nerve root compression, where ChatGPT responded that none of the options was correct. Additionally, inconsistencies arose in six cases, specifically regarding Stroke Assessment, Muscle Role in Gait, Compartment syndrome, Flexibility in Joint Movement, Lumbar Traction Technique, and Orthosis for Burns.

The findings of this study hold significant implications for integrating ChatGPT in physiotherapy education and practice. While the model exhibited commendable accuracy in answering most questions, the identified discrepancies, particularly in complex clinical scenarios, caution against overreliance on ChatGPT as a sole information source in decision-making. The study underscores the importance of adopting a cautious and discerning approach, positioning

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ChatGPT as a supplementary tool rather than a standalone resource in physiotherapy practice. Physiotherapists and educators should be mindful of its limitations, emphasizing the need for continuous refinement and alignment with domain-specific knowledge to enhance its reliability.

Future research should prioritize refining ChatGPT's understanding of intricate clinical scenarios. Collaboration with physiotherapy experts for iterative refinement based on their feedback is crucial for aligning the model with real-world practices. Additionally, exploring the customization of ChatGPT for specialized areas within physiotherapy, such as neurophysiotherapy or pediatric physiotherapy, could enhance its performance in addressing specific challenges associated with these subfields.

Validation studies involving more extensive and diverse datasets and real-world clinical scenarios should be prioritized to comprehensively assess ChatGPT's utility and limitations. Collaborative efforts with physiotherapy boards and organizations can establish the model's reliability under exam-like conditions. Moreover, developing user interfaces tailored for physiotherapists in clinical settings could streamline information retrieval and decision support, enhancing the practical application of ChatGPT.

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Supplementary File: Link to ChatGPT Response

1. https://chatgpt.com/share/6698b471-2858-4b16-a54a-f70f17d2970c
2. https://chatgpt.com/share/7f44241a-d1f9-45d3-96c9-6b79067943a0
3. https://chatgpt.com/share/386a66b1-0a81-412a-af07-2300ba12a9ce
4. https://chatgpt.com/share/d3157910-56ac-4266-9edd-8f7b3c007f63
5. https://chatgpt.com/share/8f9cb6a3-6822-4ea4-9bd7-2c765ec16006
6. https://chatgpt.com/share/19020102-bbcc-499f-b06c-db250dbef1d7
7. https://chatgpt.com/share/e7040edc-0008-440b-85ba-5354a5641834
8. https://chatgpt.com/share/d56e6a4d-6e07-4baf-9e8b-0c717f39dd83
9. https://chatgpt.com/share/0dad4695-9452-4aa2-bbeb-85cd419cca54
10. https://chatgpt.com/share/709517d9-b15e-448e-957f-2862d916e004
11. https://chatgpt.com/share/9a4445b2-1e8f-46e4-a0ce-b42d199eeeef
12. https://chatgpt.com/share/eb62d020-ab14-4644-89c7-cbd15cd8cefa
13. https://chatgpt.com/share/eb62d020-ab14-4644-89c7-cbd15cd8cefa
14. https://chatgpt.com/share/2c60be9c-b987-45fa-a41d-47ccbf7a9b15
15. https://chatgpt.com/share/42ce9168-bc40-4578-9630-788a309c77af
16. https://chatgpt.com/share/92dff55d-1242-4c18-b8fe-ad27991c4774
17. https://chatgpt.com/share/da21fa2f-7e54-4a98-91ac-0f76be6046b6
18. https://chatgpt.com/share/5fb0dd9a-9e22-4fb1-9637-3b9b52ee98b4
19. https://chatgpt.com/share/69b30867-4f7c-4e6f-8277-c5703a21b61f
20. https://chatgpt.com/share/0655a55a-0f19-46ec-87a0-6452a1de6022
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22. https://chatgpt.com/share/bf4874b9-3e71-4097-935e-1251531b2a3d
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24. https://chatgpt.com/share/6caee4c5-991b-4e57-a5df-dd11fdf0f289
25. https://chatgpt.com/share/808675a0-b85c-4bff-9710-6421cdba70c8