

Can ChatGPT answer Pregnant Women Questions?

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Abstract

OpenAI has developed ChatGPT which is considered as one of the famous artificial intelligence tools. It provides a significant advancement and particularly noted in order to create a speaking conversations with human. This review paper shows the use of ChatGPT in women care in their pregnancy time. ChatGPT provides available and sympathetic information and replies to any questions about childbirth, pregnancy and woman care. The reliability and accuracy of ChatGPT's answers is important to be checked. It also helps to support decision making in pregnancy clinical problems but it recently lacks the precision and appropriate answers without doctor oversight. Moreover, it provides technical accurate information, proper medical answers with lacks of references. However, it is not always giving correct answers. very few studies have been done on this area and most of them in English. This research attempted to ask ChatGPT in Arabic. We choose five of the common questions that always be asked by pregnant ladies in their booking visit and compare the answers of ChatGPT with the answers of three famous obstetrician doctors in Iraq in order to see the similarities or differences.

Keywords: *Artificial intelligence, AI, pregnancy questions, pregnant woman, early pregnancy.*

Introduction

OpenAI, is one of the first private organizations that aimed to build artificial intelligence (AI) using research and development methods in order to generate safe AI tool that can advantage humanity (OpenAI, 2025). Therefore, one of the best innovations is ChatGPT which is refers to Generative Pre-Trained Transformer (ChatGPT). On November 2022. ChatGPT was released to be used as virtual conversations (chatbot). It is build based on machine learning techniques using advanced language processing in order to provide virtual help by simplify collaborative conversations (King & ChatGPT, 2023). A chatbot is a kind of AI tool. it is a language system acting as a computer-generated conversational agent (Ivanovic and M. Semnic, 2018). The current studies of chatbot in healthcare sector are recognized a variety of practices for this digital technology tool such as therapy, self-management, education, counseling, diagnosis and screening (Abd-Alrazaq, 2020). Moreover, it has gathered important international attention because it is able to make text which is similar to human text. According to Shetty, et al., (2024) "in one study, human reviewers mistakenly identified 32% of the generated abstracts as authentic, as ChatGPT's outputs cleverly bypassed plagiarism detection systems". In scientific research in medical treatments ChatGPT's provide incorrect information and inaccurate abstract and till now there is no verification tools that can test originality and accuracy of this abstracts (Else, 2023). In general, ChatGPT nowadays is became more common, in specific it is increasingly used in pregnancy inquiries because it provides high quality respond and sympathetic answers to patient questions in anytime and anywhere (Ayers et al., 2023; Chandler, et al., 2025; de Vries et al., 2025). It is an AI tool based on conversational model that uses deep learning techniques to create answers as human. This may provide important usefulness in patient information with easy and fast response compared to classic technique (Johnson et al., 2023; de Vries et al., 2025). This article explores the answers of ChatGPT about patient's pregnancy common questions, compare them with doctors' answers and get the doctors opinions about ChatGPT's answers.

ChatGPT and Pregnancy

The healthcare sector has keep developing day by day, however, it is still facing many kinds of issues that should be solved such as diagnostic and treatment errors, resource wastage, inefficient workflows, and system costs of healthcare (Sinha, 2024). Medical doctors in another hand should be up to date to the medical knowledge and technology but this needs extra time and effort from them in order to update, and get more expertise (Leong, 2025). “While individual doctors have a professional responsibility to stay up-to-date, institutions and professional bodies may have a responsibility to make this easy (or at least easier)” (Leong, 2025). Therefore, in order to do make it easy to them doctors should learn and medical institutions have to apply the current technologies. These technologies can enhance doctors’ knowledge, provide information and analysis tools. Moreover, AI technologies like ChatGPT, provides computer program solutions that can assists the patients in order to handle their treatment by alerts them to follow their prescription and provide health status information (Al Kuwaiti et al., 2023). It can also provide advice to patients in illness like diabetes, flu, and cold. However, ChatGPT can also have problems in medical sector such as ethics, privacy, data interpretation, liability, security and consent (Javaid, Haleem & Singh, 2024). Worldwide in every single year there are millions of pregnancy women and over than 40% being unplanned. Primary pregnancy care is critical in these cases in order to prevent adverse difficulties and pregnancy results (Ahmadian, et al., 2020). A health and life of pregnancy based on many important factors such as, recognize and manage health problems, physical and emotional ready, early care, reduce risk during pregnancy and after birth. Nowadays pregnant women are seeking for advices and information on the internet in order to find answers of their questions. A current research suggested that 400 women in their pregnancy period use the internet to get information as the ask a doctor (Ahmadian, et al., 2020). Moreover, these women did not check that information with their doctors. For ChatGPT many pregnant women use it to seek information, but those information’s validity is uncertain. Some recent studies had checked the accuracy and validity of ChatGPT in providing information to pregnant women. For example, Wan 2023 found that 50% of ChatGPT answers were correct, remain were incorrect or incomplete, thus they suggested to be careful with AI responds (Wan, et al., 2024). Other study mentioned that the information need to be enhanced, more reliable and understandable (Onder, et al., 2024). Other studies pointed out they are satisfied from the answers and some of the information was incorrect (Tsai et al., 2013; Peled, et al., 2024). Based on these current studies, this researcher suggested that ChatGPT answers should not be solo relied on in order to make a good information and advice for pregnant women. According to these finding this study checked the answers of ChatGPT with doctors’ answer in Iraqi pregnancy private clinics. Next section explains the method of this study and then the result from this comparison.

Methodology

The first step of this researcher was asking the three professional doctors with at least 10 years’ experience in pregnancy field. These 3 doctors have associate professor title. This study asked the doctors which are the most five common questions that pregnant women usually ask in their first visit after they know that they are pregnant. The common questions that each doctor made were almost the same. Moreover, the doctors had been asking to make the question simple and with easy language as the pregnant women usually ask. However, the language was Arabic and slang because it is the everyday uses language among the people in Najaf, Iraq. However, in the second step, the research did ask the doctors to answers their five common questions. In table 1 shows the five common question that doctors made with their answers about each one.

Table 1: Questions and expert doctors’ answers

no	Question	Answer
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1	What foods are contraindicated during the early stages of pregnancy?	It is advisable to avoid canned foods. Unpasteurized milk and cheeses should be avoided. Fast foods and highly spiced foods are best limited or avoided. Undercooked or inadequately cooked meats should be avoided.
2	Is sexual intercourse considered safe during the early stages of pregnancy?	Yes, with reduce.
3	Are there any vaccinations recommended during the early stages of pregnancy?	The first vaccine administered during pregnancy is the tetanus toxoid vaccine, which is typically given at the beginning of the fourth month of gestation.
4	Is folic acid supplementation recommended during early pregnancy, and for how long should it be continued?	It is recommended to begin supplementation three months prior to conception and to continue throughout the first three months of pregnancy.
5	At what gestational age is ultrasonography recommended during pregnancy?	It is preferable to perform the examination within the first 8–10 weeks of pregnancy.
no	Question	Answer
1	What foods are contraindicated during the early stages of pregnancy?	Liver should be consumed in limited amounts.
2	Is sexual intercourse considered safe during the early stages of pregnancy?	Yes, it is permitted,
3	Are there any vaccinations recommended during the early stages of pregnancy?	The first dose of the tetanus vaccine is administered in the fourth month of pregnancy.
4	Is folic acid supplementation recommended during early pregnancy, and for how long should it be continued?	Folic acid at a dose of 400 micrograms once daily is recommended to be continued until the fourth month of pregnancy.
5	At what gestational age is ultrasonography recommended during pregnancy?	The first ultrasound examination is preferably performed at 6–7 weeks of gestation to confirm fetal cardiac activity and serves as a baseline scan for accurate dating of the pregnancy.
no	Question	Answer
1	What foods are contraindicated during the early stages of pregnancy?	Liver and pineapple uncovered foods should be avoided. Excessive consumption of tea and coffee should be avoided
2	Is sexual intercourse considered safe during the early stages of pregnancy?	It is permitted, if there are no medical issue.
3	Are there any vaccinations recommended during the early stages of pregnancy?	The first vaccination is administered during the fourth month of pregnancy.
4	Is folic acid supplementation recommended during early pregnancy, and for how long should it be continued?	Folic acid supplementation should be initiated three months prior to conception and continued throughout the first three months of pregnancy.

5	At what gestational age is ultrasonography recommended during pregnancy?	Between 6 and 8 weeks of gestation.
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Second step that this study did, ChatGPT version **GPT-5.5** has been used with free access because this is the usually people use there. However, the research did ask ChatGPT about these five questions and get the answers, see table 2. This research did ask the ChatGPT the questions one by one in order to get an exact result for each question. The answers were with more details and information compare to doctors' answers. Third step was compared doctors' answer with ChatGPT's answers by using NVivo system in order to analyses the unstructured data from these answers of each question. Final step is showed the ChatGPT's answers to the doctors in order to ask about the opinion and accuracy of these answers. This research suggested the doctors to evaluate the answers based on quality, secure, privacy, correct, complete.

Table 2 Questions and ChatGPT's answers

no	Question	Answer
1	What foods are contraindicated during the early stages of pregnancy?	Raw or undercooked meat and eggs. Unpasteurized soft cheeses, as well as unpasteurized milk and juices. Fish with high mercury content. Excessive consumption of liver. High intake of caffeine. Ready-to-eat or refrigerated foods that have not been adequately reheated. Foods that have not been properly washed.
2	Is sexual intercourse considered safe during the early stages of pregnancy?	Yes, sexual intercourse is generally considered safe during early pregnancy in most cases.
3	Are there any vaccinations recommended during the early stages of pregnancy?	Yes, certain vaccinations are recommended and considered safe during pregnancy; however, not all are specifically administered during the early stages of gestation.
4	Is folic acid supplementation recommended during early pregnancy, and for how long should it be continued?	Yes, folic acid supplementation (commonly referred to as "anti-malformation" tablets) is recommended during early pregnancy. It is essential for reducing the risk of neural tube defects in the developing fetus. Recommended dosage: The standard dose is 400–800 micrograms daily. Higher doses may be required in certain cases (e.g., a history of fetal anomalies or specific medical conditions), as determined by a healthcare provider. Duration of use: Ideally initiated at least one month prior to conception (in planned pregnancies). Continued through the end of the first trimester (up to 12 weeks of gestation).
5	At what gestational age is ultrasonography recommended during pregnancy?	Ultrasonography is typically performed between 6 and 8 weeks of gestation. This allows confirmation of an intrauterine pregnancy and assessment of fetal cardiac activity.

The first question “What foods are contraindicated during the early stages of pregnancy?”.

These are part of the doctor response – some correct, which included avoidance of any meat that was not cooked well, and unpasteurized dairy products – and these were taken as being as one of the risk factors for food borne infections in pregnancy. The presence of canned food, fast food and highly spiced foods, however, is representative of general dietary recommendations, and not of specific contraindications during early pregnancy. This means that the data is partially accurate, and relatively imprecise in its conception. The second doctor only wanted to restrict liver consumption as it contains high levels of vitamin A and can be teratogenic in high doses. However, its response is narrow and incomplete and does not include a few important food contraindications and therefore limited in clinical usefulness. The third doctor answer the first question, as this answer identified liver and too much caffeine intake as concerns during pregnancy. But there is not much evidence of pineapple in the existing clinical guidelines. Moreover, key food safety issues like unpasteurized product or uncooked food were not addressed. This makes its accuracy and completeness less. The answer, however, showed strong agreement with existing clinical guidelines was provided by the ChatGPT. It comprehensively covered: Raw or undercooked meat and eggs, unpasteurized dairy products, High-mercury fish, Excessive liver consumption, high caffeine intake, foods that are not prepared to be eaten and are not cooked sufficiently and improperly washed foods. These categories are based on already published evidence-based recommendations on infection risk, toxicity and dietary safety during pregnancy. Table 3 shows the analysis of first question.

Table 3 First question analysis

Criterion	Doctor 1	Doctor 2	Doctor 3	ChatGPT
Medical Accuracy	Moderate	Moderate	Moderate–Low	High
Completeness	Moderate	Low	Low–Moderate	Very High
Evidence-Based Alignment	Moderate–Low	Moderate	Low	High
Clinical Relevance	Moderate	Low	Moderate	High
Clarity and Organization	High	Moderate	Moderate	High

ChatGPT offered the most comprehensive answer, covering all major domains of early pregnancy dietary risk factors, including microbiological safety, toxic exposure, and stimulant consumption. There was selective knowledge on the part of the physicians, who tended to address only one aspect (for instance, liver or caffeine) without giving a well-organized, guideline-based overview. In qualitative analysis, the first doctor response exemplifies a common pitfall; that of general guidance on diet and actual contraindications. The reference to pineapple by third doctor is a case of variation in clinical perception that is not in accordance with evidence based guidelines. The detailed and guideline-consistent answer about contraindicated foods in early pregnancy was best provided by ChatGPT. The physicians were somewhat accurate but tended to be superficial in their responses and not address systematically the key risk categories. In addition, some responses contained general dietary advice without separating it from contraindications, or recommended non-evidence-based treatments. The results indicate that ChatGPT exhibited greater accuracy in terms of completeness and adherence to clinical guidelines, while physicians' answers showed some variability in terms of depth and evidence application.

The second question “Is sexual intercourse considered safe during the early stages of pregnancy?”.

The first doctor's answer (“Yes, with reduce”) equates sexual intercourse with the idea that it is not permitted, but should be limited. Clarify though the meaning of the statement is unclear. No justification given for the need for reduction and conditions for which. The clinical

implications of routine reduction in uncomplicated pregnancy is not uniform and the answer is therefore not precise and may be misleading. The second doctor's answer (Yes, it can be done) is clear but simple. It does state that there are no restrictions on sexual intercourse (as is correct), but it does not include a couple of important clinical limitations such as absence of complications (e.g. placenta previa bleeding etc.). Only a small number of symptoms are involved, which restricts its clinical completeness. Note that the third doctor's response introduces a conditional factor into the case ("It's alright, unless there's a medical problem"); this makes for a better handling of the clinical case. This is more in line with the standard medical advice which states that sexual activity is safe in uncomplicated pregnancies. However, a reply is given which is very short and does not indicate relevant risk situations. However, the ChatGPT, the response ("Yes, sexual intercourse is generally considered safe during early pregnancy in most cases") provides a balanced and accurate statement. The use of the terms "generally" and "in most cases" adequately accounts for clinical uncertainty and variation. The answer, although short, does make an implicit point that exceptions might occur, consistent with evidence-informed guidance. However, it doesn't explicitly list contraindications like the physicians' answers.

Table 4 Second question analysis

Criterion	Doctor 1	Doctor 2	Doctor 3	ChatGPT
Clinical Accuracy	Moderate–Low	High	High	High
Completeness	Low	Low	Moderate	Moderate
Conditional Reasoning	Low	Low	High	Moderate–High
Clarity	Low	High	Moderate	High
Risk Awareness	Low	Low	Moderate	Moderate

The third doctor is provided the most explicit acknowledgment that sexual intercourse is conditional upon the absence of medical complications. It is a key concept in obstetric guidance. The second doctor and ChatGPT both delivered accurate but generalized responses. While correct, they lack explicit mention of contraindications such as vaginal bleeding, placenta previa, or threatened miscarriage, which are important in clinical counseling. The first doctor response illustrates a limitation in qualitative responses: unclear phrasing ("with reduce") reduces interpretability and may introduce ambiguity in clinical meaning. ChatGPT demonstrated a balanced approach by using cautious language ("generally," "most cases"), which reflects appropriate medical uncertainty. However, like most responses, it did not expand into detailed clinical conditions. All responses correctly indicated that sexual intercourse is generally safe during early pregnancy. However, there was variation in clarity and clinical depth. The third doctor provided the most clinically nuanced answer by acknowledging that safety depends on the absence of medical complications. The second doctor and ChatGPT offered accurate but generalized statements without explicit reference to contraindications. The first doctor response lacked clarity and precision. Overall, while both physicians and ChatGPT demonstrated correct baseline knowledge, the depth of clinical reasoning and communication varied, with no response fully addressing the range of conditions under which sexual activity may be contraindicated, table 4 shows the analysis of second question.

The third question "Are there any vaccinations recommended during the early stages of pregnancy?"

The first vaccine given in pregnancy is at the end of the fourth month, and is tetanus toxoid vaccine, the first doctor has said. There are two things wrong with this response. First, it makes vaccination against tetanus the sole routine vaccination recommendation during pregnancy, as the current guidelines prioritise influenza vaccination in the whole of pregnancy if in season, and Tdap (diphtheria, tetanus and polio) vaccination later in pregnancy. Second, the timing does not match up with current major recommendations for Tdap which are for the 27-36 weeks'

vaccination period, though there is some advice in the UK for pertussis-containing vaccination up to 16 weeks. The same message, "2nd doctor said the first dose of tetanus vaccination is given in the 4th month of pregnancy" was posted by second doctor. This is also contrary to current evidence based recommendations. It does not include other regularly recommended vaccines, particularly influenza, and portrays the advice on maternal immunisation in a misleading way. Third doctor said nothing more than, "The first vaccination is during the fourth month of pregnancy." This answer provides the least information since it does not specify vaccine, indication or highlight the broader group of vaccines given to pregnant women. This is very sketchy and has less clinical value and analytical value. There is a different recommendations schedule for each vaccine used in a child's immunisation schedule, no longer from a single unspecified vaccine at four months of age. ChatGPT said some vaccines are recommended and known to be safe when pregnant, but that not all vaccines are recommended specifically when the patient is in their early weeks pregnant. This is the best answer of the four as it appropriately acknowledges that some vaccines are also recommended during pregnancy, but also shows an understanding of differences in the timing of vaccines. For instance, flu vaccine may be administered any time during pregnancy, Tdap vaccine is recommended later, and RSV vaccination is recommended later yet in eligible settings. The solution is of a general nature, but conceptually similar to current guidance.

Table 5 Third question analysis

Criterion	Doctor 1	Doctor 2	Doctor 3	ChatGPT
Medical accuracy	Low–Moderate	Low–Moderate	Low	High
Correct timing of vaccination	Low	Low	Low	High
Completeness	Low	Low	Very Low	Moderate
Evidence-based alignment	Low	Low	Low	High
Clarity	Moderate	Moderate	Low	High

A consistent theme surfaced through all three physician responses, which assumed that maternal vaccination started at 4th month of pregnancy with tetanus vaccine. This is not aligned with the current guideline based framework which differentiates vaccines based on indications and timings. Influenza vaccines can be given at any trimester of pregnancy, whereas Tdap is recommended towards the end of pregnancy, and RSV vaccine later in eligible populations. Physician responses tended to be more narrowly framed with almost only tetanus vaccination antibodies raised. There was far less immunization guidance for the mother, however, as current recommendations cover several vaccines such as influenza and, in some instances, COVID-19, and even RSV vaccination at a later stage in pregnancy. ChatGPT gave only a list of vaccines it recommended, but correctly quantified the problem by stating that vaccines might be recommended during pregnancy and that time varies with vaccine. This answer was concise and showed increased conceptual accuracy than the physician answer. ChatGPT answered most accurately and in accordance with guidelines when asked about vaccination during the early pregnancy. The three physician responses were a very unsubstantiated or simplistic one based on the belief that maternal vaccination starts with tetanus vaccination in the fourth month of pregnancy. Compared, however, to recommendations for vaccination at any trimester when appropriate, Tdap is recommended later in the pregnancy, and other vaccinations like COVID-19 and RSV may be recommended as appropriate. In general, the doctor answers were incomplete, and not fully consistent with the modern parenting recommendations for immunizations; the answer that was given by the chat GPT were quite similar conceptually and supportive of the modern recommendations of the physicians. Table 5 shows the analysis of third question.

The Fourth question, "Is folic acid supplementation recommended during early pregnancy, and for how long should it be continued?"

The first doctor rightly put forth that taking folic acid should be started three months before conception and should be taken till the initial three months. This correlates with the evidence based recommendations for timing and duration. Response lacks dosage and clinical rationale (e.g., neural tube defect prevention), though, thus reducing the completeness of the response. The second doctor said 400 micrograms a day was recommended as is standard for low-risk pregnancies. The length of this period was mentioned as up to the 4th month of pregnancy, a little longer than the usual timing of the supplementation to the end of the 1st month of pregnancy (12 weeks) but suitable in practice. The reply does not include a reference to preconception initiation, though which is a vital ingredient in the advantage of folic acid. The timing of the third doctor's response is very similar to the first doctor's, suggesting starting 3 months prior to pregnancy and continuing into the first trimester of pregnancy. As with the first doctor, it does not include any indication of dosage and clinical indication but is quite consistent with guideline-driven timing. ChatGPT gave the most extensive answer. It correctly identified, the explanation of the significance of the intervention to the family/carer, explanation of the clinical purpose (prevention of neural tube defects), the recommended dose range is 400–800 micrograms a day, a dose adjustment is needed when this situation occurs and when this occurs, a dosage adjustment is required (in high-risk cases) with the best time (before conception). This recommendation is included for the length of time (end of first trimester) This is broadly in line with guidance from other organisations such as the Centers for Disease Control and Prevention and World Health Organisation. It reflects both comprehensiveness and clinical thinking.

Table 6 Fourth question analysis

Criterion	Doctor 1	Doctor 2	Doctor 3	ChatGPT
Medical Accuracy	High	High	High	Very High
Timing of Initiation	High	Moderate	High	Very High
Duration Accuracy	High	Moderate–High	High	Very High
Dosage Accuracy	Not specified	High	Not specified	High
Completeness	Moderate	Moderate	Moderate	Very High
Evidence-Based Alignment	High	High	High	Very High

All three physicians correctly recognized the need for folate supplementation and the time frame of folate supplementation during early pregnancy. This compares to more variation with the previous questions. First and third Doctors got on to the matter of when and how long, but omitted to give a dosage or why. Variations in emphasis in responses were noted, with second Doctor missing preconception initiation instructions for dosage. ChatGPT seamlessly incorporated various components such as indication, dosage, timing, and duration into one cohesive answer. This is a more comprehensive and consistent description, beneficial for patient education and academic completeness. 100% of all respondents had selected folic acid supplementation as essential as a part of early pregnancy care. Doctor 1 and Doctor 3 were correct in prescribing the recommended times for starting and stopping the treatment, and Doctor 2 was right about the dosage, though worked with the lack of preconception initiation. The most detailed and comprehensive response was given by ChatGPT, which followed instructions and guidelines from recognized sources like the CDC and WHO on indications, dosages, timing and duration. Overall, the responses of the physicians showed the correct basic information, and ChatGPT showed more complete and well-integrated evidence which is based on recommendations. Table 6 shows the analysis of fourth question.

The fifth question “At what gestational age is ultrasonography recommended during pregnancy?”.

The first doctor made a suggestion to do ultrasonography from 8 to 10 weeks of gestation, an acceptable time for early pregnancy scans. The answer is a bit shallow not specifying what it

was being used for (confirmation of viability, dating a pregnancy, etc.). Also, it suggests a window of preference, not several, as in the recommended scans during the course of the pregnancy. The second doctor gave the most detailed response among other doctors, and suggested to do it by 6–7 weeks of gestation. In the answer, doctors were mentioned suitably such as: Confirming fetal cardiac activity, locating baseline for a precise pregnancy date. The answer of second doctor is considered as good thinking and is in line with the usual practice of ultra-sonography for early pregnancy. But, like other answers, it does not recognise further regular scans. During the third doctor's visit, the average time from conception was 6 to 8 weeks, and ultrasonography was recommended. The response, however, misses the clinical purpose, and does not reflect the general ultrasound agenda to be followed throughout pregnancy. Between 6 and 8 weeks of gestation, ChatGPT suggested ultrasonography, and provided relevant clinical indications: A single additional test can confirm intrauterine pregnancy. A single extra test can confirm intrauterine pregnancy. This item refers to the assessment of the fetal cardiac activity. This response is accurate and clear. As with the comments from the doctors, however, it is only for early pregnancy and fails to recognize the entire antenatal schedule of routine scans (such as the anomaly scan and first trimester screening).

Table 7 Fifth question analysis

Criterion	Doctor 1	Doctor 2	Doctor 3	ChatGPT
Timing Accuracy	High	Very High	High	High
Clinical Reasoning	Low	High	Low	High
Completeness	Low	Moderate	Low	Moderate
Evidence-Based Alignment	High	Very High	High	High
Clarity	Moderate	High	Moderate	High

The level of knowledge amongst the respondents was high, with all participants agreeing that early ultrasonography is usually carried out between 6 and 10 weeks to do the gestation. Doctors 2 and ChatGPT gave more clinically relevant answers, describing the reason for early ultrasound, while first and third doctors only mentioned the time without a clinical context. One of the common observations from all the responses is that they don't mention the full schedule of antenatal ultrasounds, such as: A screening scan during the first trimester (11-13+6 weeks) A second-trimers' scar. A second trimesters anomaly (18-22 weeks). This means there's a common type of incompleteness not accuracy. Responses from ChatGPT and Doctor 2 are very well balanced between conciseness and clinical-relevance, whereas the others were mostly overly brief and lacked the depth and breadth of the responses. In general, the knowledge of timing for early pregnancy ultrasonography was accurate with an appropriate response window ranging from 6 to 10 weeks of gestation by all the respondents. Doctor 2 and ChatGPT gave more clinically informative responses in providing information on the purpose of early ultrasound including, confirmation of fetal viability and pregnancy dating. None of the responses however, covered the wider range of recommended pellet scans which is” first trimester screening and second trimester anomaly scan”. Overall, accuracy of the answers was at a high level for all participants, but completeness of the clinical explanation and depth of answer, did vary with ChatGPT and second doctor providing the most informative answers. Table 7 shows the analysis of fifth question.

Results and Discussion

Using an analysis software tool such as NVivo to analysis the responses of three professional medical doctors who are specialist in gynecology with associate professor titles and minimum 10 years of experience and ChatGPT were compared in terms of five clinical questions about early pregnancy care. Responses were organized into a number of categories reflecting key focus areas such as accuracy and completeness, clinical reasoning, and adherence with approach to evidence-based guidelines.

Q1: Foods Contraindicated During Early Pregnancy

Identification of contraindicated foods was somewhat variable. ChatGPT gave the most detailed answer, including the most prominent categories that include raw or undercooked foods, unpasteurized dairy products, too much liver products, high mercury fish, caffeine, and foods not handled properly. Physician responses were more constrained, however, compared to doctors. First doctor is provided partial accuracy and also gave some non-specific dietary advice (e.g. avoid spicy/canned foods) information. The second doctor gave a very good, albeit limited, focus on liver consumption. Elements provided to the third doctor correct. However, third doctor provide an element in her answer with non-evidence-based advice (e.g., avoiding pineapple). Overall, ChatGPT was more complete and conformed with current dietary safety advice.

Q2: In early pregnancy, is sexual intercourse safe?

In early gestation, is sex safe? 100% of respondents Think Sexual Intercourse is generally safe during early pregnancy. But there were doctor nuances. The third doctor offered the appropriate conditional response – no medical complications for safety. The second doctor and ChatGPT made accurate and general statements, not mentioning contraindications. The answer to Doctor 1 was not exactly clear or precise. In general, the level of doctors thinking was quite similar, but there were variations in the depth of the clinical reasoning.

Q3: Is it safe to vaccinate early pregnant women?

There were great differences in this area. All three physicians had outdated or oversimplified knowledge in relation to tetanus vaccination — they put 4th month vaccination as the primary/initial vaccination. By contrast, ChatGPT was correct in calling the recommendations different from/or different when, with influenza vaccines during any trimester and other depending on gestational age and indication, it was aligned with existing recommendations. This question had the highest level of disparity from physician answers to evidence-based recommendations.

Q4: Folic Acid Supplementation

The baseline knowledge of all the respondents was correct. First and third doctors gave the correct advice on starting treatment before pregnancy and then continuing treatment during the first trimester. Doctor 2 accurately identified the dosage, but forgot to include preconception initiation. The response from ChatGPT was the most detailed, including indication, dosage range, timing and duration. There was no major difference in this question regarding both completeness and accuracy.

Q5: Timing of Ultrasonography

The early pregnancy sonography of the foetus (around 6-10 weeks of gestation) was correctly identified by all the respondents. To offer more context for the clinical situation, Doctor 2 and ChatGPT helped by giving additional context as to the clinical rationale for the early ultrasound (e.g., confirming viability, dating the pregnancy, etc.). No answer highlighted all the recommended antenatal ultrasonography performed, comprising of first trimester screening and anomaly scans at the second trimester. Therefore, all responses, with high accuracy but had limited completeness.

The study provides a first-of-its-kind analysis that shows differences in the quality and completeness of the responses from obstetrics and gynecology (OBGYN) doctors and ChatGPT

on seven areas of early pregnancy care. One common finding was that when physicians responded to multiple questions they were brief and clinically accurate, but not comprehensive. Often their answers were given at a particular point on a question without offering a comprehensive or structured approach. This appeared prominent in the areas of vaccinations and dietary advice, among which some were related to outdated information or not in accordance with proper evidence-based measures. ChatGPT quantitatively yielded more detailed and structured response, provide several elements and components of clinical counseling, such as risk factors, timing, and rationale, in consistent and continuous manner. A significant example of this was in questions about food items that are contraindicated and folic acid supplementation, with ChatGPT performing very well with strong alignment to existing guidelines. The answers provided by ChatGPT, however, were rather general and lacked specificity, and sometimes did not reference particular contraindications or clinical details that were important (e.g., complications with sexual activity during pregnancy). This indicates that ChatGPT models are very good in terms of their knowledge integration and completeness, but they are less likely to perform context-specific reasoning as achieved by the clinicians. One significant difference that would come to mind is that ChatGPT might generate more comprehensive summaries than doctors would, as it draws from guidelines, whereas doctors may give more focused and experience-based responses. Both have their pros and cons.

Conclusion

Overall, this comparative learning found that both doctors and ChatGPT had a fairly accurate baseline knowledge of the early pregnancy care. In general, ChatGPT gave answers that were more complete, organized, and followed the guidelines, especially when multiple recommendations were needed to be integrated. Although physician responses were mostly correct, it was often incomplete, and occasionally contained obsolete and non-evidence-based information. At the same time, the answers generated by ChatGPT were comprehensive and sometimes too generic with insufficient clinical specificity. Based on these results, the use of ChatGPT could provide a useful supporting assistant in evidence consolidation, while clinical knowledge and judgment are essential for providing tailored context and decision making. The limitations of these findings should be noted: Only three physicians were included in the analysis, which lacks generalizability; several questions on the questionnaire were answered with numbers or with statements restricted to just a few respondents. Physicians were given a room full of your questions and responded interview style, while ChatGPT had a different type of response with a set of preformulated ones and may have included comparison bias. The recommendations (for example, vaccination schedule) given in practice may differ from country to country, as may be the results of the physician's evaluation of the situation. Questions were general in nature and didn't contain patient-specific information, so this could have negatively influenced respondents' returns as physicians. ChatGPT provide a good answer compare to doctors therefore, this study contributes to encourage the patients to use ChatGPT in order to answer some of their question but the should always ask and contact their doctors. This research suggestion the further research to apply more and different questions also can ask more expert doctors such as five or more. Also this study asked the doctors to make their answers short and easy as the way they talk to their patients. Maybe that why analysis showed that ChatGPT has better answers than them. Finally, only ChatGPT was tested in this study thus, different AIs tools can be used in future studies such as Gemini and DeepSeek.

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