



## Influence of Fertility Tracking Applications as Digital Health Communication Platforms on Ovulation Monitoring Behavior among Women in Delta State, Nigeria

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### Abstract

*This study examined the influence of fertility-tracking applications, as digital health communication platforms, on women's ovulatory monitoring behavior in Asaba, Delta State, Nigeria. Guided by the Health Belief Model, the study adopted a descriptive survey design. The population comprised approximately 60,000 women aged 15–49, from whom 397 respondents were selected using the Taro Yamane formula and convenience sampling. Data were collected through structured questionnaires and analyzed using means and standard deviations, with a criterion mean of 2.50. Findings revealed high exposure to reproductive health information through fertility-tracking applications (mean = 3.06), high engagement with that information (mean = 3.06), and a positive influence on ovulatory monitoring behavior (mean = 3.07). The study concludes that fertility tracking applications extend beyond menstrual tracking to serve as digital health communication platforms that promote reproductive health awareness and ovulatory monitoring. It recommends that developers provide evidence-based information, health professionals integrate these applications into reproductive health programs, and women use them to improve fertility awareness and reproductive health.*

**Keywords:** Fertility Tracking Applications; Digital Health Communication; Reproductive Health Information; Ovulation Monitoring Behavior; Women in Delta State.

**Paper Type:** Research paper

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## INTRODUCTION

One of the core principles of health communication throughout history has been to promote healthy lifestyles and improve the quality of life for all individuals. Until the introduction of digital tools, the dissemination of reproductive health information was achieved through interactive communication between patients/clients and healthcare providers, as well as through mass media campaigns such as television and radio advertisements (Chime-Nganya and Ezema 2026; Opatunji and Sowunmi 2024). Specifically, in the field of reproductive health, women predominantly sought information from hospitals, outpatient clinics, reproductive health centers, family planning clinics, and community health officers or workers on the menstrual cycle, fertility, ovulation, and pregnancy (Ogundipe et al. 2025). Over time, digital platforms and applications were introduced to facilitate the transmission of health information.

One significant use of mobile health applications has come in what is largely referred to as “fertility tracking applications”. Originally conceived as simple digital calendars for tracking menstruation and predicting women’s monthly cycles, these applications have evolved into comprehensive digital health platforms that provide reproductive health education, ovulation predictions, menstrual analysis and forecasting, monitoring of physical and emotional symptoms associated with menstruation, fertility forecasts, pregnancy planning assistance, alerts and notifications, and curated health information. Rather than serving merely as period trackers, many modern fertility applications function as digital communication platforms for reproductive health (Ogundipe et al. 2025; Inobemhe et al. 2026). Earle, Marston, Hadley, and Banks (2021) note that tracking applications are increasingly recognized as useful resources that combine reproductive health information with monitoring and management features. Consequently, fertility and ovulation tracking applications can be understood as tools within broader digital health communication systems.

Indeed, a whole array of women’s fertility and menstruation-tracking tools has been designed, including period calendar, my calendar period tracker, period diary, period calendar by simple design, clue period calendar and ovulation tracker, and flo period tracker. In Nigeria, the growing ownership and use of smartphones have encouraged women, particularly students, young professionals, and women of reproductive age, to use digital applications to track

their menstrual cycles, identify their fertile periods, and plan or delay conception (Osamor, Nwokedi, and Wogu 2025; Ayodeji, Oni, and Ogunoye 2025). Ovulation monitoring helps women identify when they are ovulating, allowing them to maximize their chances of becoming pregnant or to avoid pregnancy (Ogundipe et al. 2025). Understanding the relationship between menstruation and ovulation highlights the importance of monitoring and tracking menstrual cycles (Al-Rshoud et al. 2021). Through reminders, fertile-window predictions, relevant health tips, and educational articles on reproductive health, these digital communication platforms may encourage women to monitor ovulation regularly. Predicting when conception is possible is important for family planning and reproductive health management (Earle, Marston, Hadley, and Banks 2021).

While digital technologies have increased women's access to reproductive health information through mobile fertility applications, this increased access has not always translated into the intended reproductive health behaviors (Gbala et al. 2024; Gyihya 2025; Inobemhe and Ja'afaru 2026). Many women use these applications primarily to track menstruation rather than to read, understand, and apply the reproductive health information they provide. Although the literature indicates that use of mobile fertility applications is increasing, limited evidence exists on whether the information these applications provide translates into improved ovulation-tracking behaviors. For instance, Nwafor et al. (2022) found that Nigerian undergraduate women frequently used the Flo application to access reproductive health information and track their fertility. Similarly, Ogundipe et al. (2025) noted that mobile technologies have increased women's access to reproductive health information in Nigeria. However, their focus was on application use and information access rather than on the role of these applications as digital health communication platforms for behavior change, particularly in encouraging women to monitor and record their ovulation more actively. Consequently, there remains limited evidence regarding how reproductive health information accessed through mobile fertility applications influences ovulation-monitoring behaviors among Nigerian women, particularly in Delta State. Against this background, the objectives of this study are to:

- 1) determine the extent of women's exposure to reproductive health information communicated through fertility tracking applications in Delta State.

- 2) examine women's level of engagement with reproductive health information communicated through fertility tracking applications in Delta State.
- 3) assess the perceived influence of exposure to reproductive health information communicated through fertility tracking applications on women's ovulation monitoring behavior in Asaba, Delta State.

### **Fertility Tracking Applications as Emerging Platforms for Personalized Health Communication**

The advent of fertility-tracking applications has transformed the landscape of reproductive health communication for women by enabling timely, personalized, and interactive mobile health messages. Rather than the reliance on traditional reproductive health communication, such as one-on-one appointments, printed materials, or media campaigns, fertility-tracking applications provide reproductive-health messages that are cycle-sensitive, personalized, and individualized. Consensus from most scholars points out that this new format enhances women's ability to access information about their reproductive health. Al-Rshoud et al. (2021) established that fertility-tracking applications were valued by many women for their fertility-tracking function and the encouragement they could provide regarding family planning. Likewise, fertility-tracking applications simplify fertility tracking through personalized reminders and ovulation predictions that help women conceive more efficiently, as stated by Blair, Morgan, and McLernon (2021) who found that women have an appreciation for fertility-tracking application-using smart phones that can facilitate the planning processes for conception through personalized prompts for reminders and ovulation predictions. Such approaches illustrate how fertility-tracking devices evolved from mere monitoring devices to applications for health information exchange.

Despite this progress, the capacity for personalized health messaging alone to encourage women to adhere to new health practices is questioned among scholars. Fertility tracking applications may provide timely notifications, fertility predictions, instructional articles, and health suggestions, which could lead to divergent interpretations by Users. Figueiredo, Ankrah, Powell, Epstein, and Chen (2024) showed that users perceived technological advancements to be as or more influential than the accuracy of the health claims made in the notification

content. For example, identifying the technology as artificial-intelligence-based was associated with a boost in confidence, even though no specific function of the technology had changed. This hints at the potential impact of source and message presentation cues, as well as credibility cues, on a user's engagement and subsequent acceptance of a personalized digital health message. Similarly, Blair et al. (2021) noted that while many women expressed confidence in their use of fertility tracking, some still harbored questions about the accuracy of fertility-tracking application forecasts, believing that verification with their care provider was important. These findings all confirm the crucial role of trust in enabling the effective delivery of personalized health messages.

Furthermore, fertility-tracking devices have been viewed as being subject to various socio and environmental considerations that influence their effectiveness. In particular, it is reported by Agbemenu et al. (2020) that cultural attitudes toward family, gender norms, availability of resources, healthcare access and different kinds of information about their reproduction impact on women's reproductive decision-making. Also, Atama et al. (2023) found that women's socio-cultural and economic conditions affect reproductive outcomes, access to reproductive care services, and reproductive information among the Ghanaian population. These arguments provide evidence that fertility tracking applications can have non-uniform effects on each user due to personal context.

### **Digital Health Communication and Behavioral Responses to Ovulation Monitoring**

Digital health communication has arisen as a key approach to promote reproductive health behaviour because digital technologies can provide reproductive health information to the general population at convenient times and tailored to individual needs (Earle et al. 2021). Online applications, social media platforms, websites and other digital means of communication transmit reproductive health information directly to their end users in the absence of typical healthcare constraints (Nwafor, Muoboghare and Osafile 2022). Fertility tracking applications have joined this wave, offering their users information on fertile periods, the symptoms accompanying different points of the menstrual cycle, detailed explanations of the reproductive process, and notifications related to the tracking of periods and ovulation. There is broad consensus among researchers on the fact that enhanced access to digital health information positively impacts

reproductive health awareness. In Nigeria, digital technologies have reinforced reproductive healthcare services, making a remarkable positive impact by enhancing women's access to relevant health information and promoting positive behavior for reproductive health outcomes (Ogundipe et al. 2025; Adekola and Ikhile 2025). In this context, Nwafor et al. (2022) report that female college students use the application “Flo” extensively as a resource for information and to track their fertility. The results above imply that communication about reproductive health could reach women in ways that enable greater engagement with that information than usual.

However, communication can, and often does, do nothing for behavior change directly, and the individual response to information communication on health behaviors can be influenced by a number of factors that operate in the process of information interpretation and decision-making (Ja’afaru et al. 2026; Köppert 2023). In particular, users' interaction with fertility-tracking applications is affected by the credibility of the information provided by applications and other technological characteristics related to the applications themselves (Figueiredo et al. 2024), and health behaviors are often dictated by factors other than communication technologies, including socio-relational factors (e.g. gender roles), personal circumstances (e.g. experiences), and physical health care access (Donnelly et al. 2023). Therefore, women might be bombarded with reminders about ovulation and information from fertility tracking applications but might still fail to keep an adequate record of ovulation tracking due to socio-relational factors or due to prior experiences.

Besides, another theme that deserves careful research inquiry is whether such forms of communication of reproductive health information has been effective in enhancing a sustained behavioral change. The digital nature of this kind of communication is, in a sense, continuous and never ceases (Figueiredo et al 2024) but while many of them find it easy to access, follow, and use, many have also realized that digital technologies have not necessarily always translated to a fundamental increase in long-term healthy practices (Chen et al. 2026). Consequently, women’s reproductive behavior is influenced by a blend of social learning through traditions, collective practice, local knowledge systems, and community interaction (Goshu and Ridwan 2026); and even for health outcomes, many reproductive decisions are still being made under socio-culturally derived circumstances (Agbemenu et al. 2020). Therefore, reproductive behavior likely results from a more in-depth interaction between digital media messages and social context.

## **Health Belief Model**

The theoretical framework for this study is the Health Belief Model (HBM), which was first developed in 1950 by Irwin Rosenstock and later elaborated upon by Becker, Maiman, Kirscht, and other researchers focusing on health behaviors (Roux et al. 2023). The theory was introduced to explain why individuals did or did not engage in preventive health behaviors, even when they had access to health-related information. The theory of HBM assumes that the behavior choice is made based on a series of considerations, namely, the individual's perceptions regarding vulnerability to a certain disease, severity of the threat posed by the condition, benefits that will result from adopting the behaviour, barriers to action, cues to action, and self-efficacy (Khalilzadeh, et al. 2023). Owing to its strength in explaining how information facilitates the transition of people's health-related behaviors toward desired behaviors, the HBM is a widely used theory in health communication and public health studies. As stated by Anuar, Shah, Gafor, Mahmood, and Ghazi (2020), the HBM is often employed to explain health behaviors due to its ability to predict individuals' responses to health information and health messages across various settings. Furthermore, Alamer (2024) argued that the HBM has consistently maintained its importance for over 50 years due to its comprehensive framework on the explaining of the behavioral changing process of health communication.

As one of the HBM's basic premises suggests, simply presenting individuals with health messages will not lead them to change their behavior. Before acting in a manner that will allow them to have a healthy condition, they evaluate health messages based on their internal and external views (Ortiz 2026). Healthy individuals undertake preventive health behaviors when they feel that they are susceptible, when they accept the disease as serious and its consequences, when they recognize that preventive measures will lead to benefits, when they feel it is worthwhile action for what it takes, and when they feel that action does not involve great difficulty. This particular premise is relevant in the current study, in that fertility tracking applications seem poised to continuously convey to women the messages, notifications, tracking alerts, predictive schedules of their ovulation's cycles, educational materials, and targeted content, which are all expected to provide fertility information and prompt continuous observation of their ovulations.

According to the HBM theory, behavior is influenced by internal and external triggers that precipitate action (Ortiz 2026). In the context of digital media communication, fertility-tracking devices typically initiate action through notifications and prompts. For women who view health issues as a major priority, the availability of digital information on reproductive and fertility issues can compel them to check notifications, alerts, reminders, ovulation predictions, and educational content on their mobile phones. For example, if people regard a disease as non-threatening in their lives because they have low concern about acquiring health issues, then barriers to performing healthy actions and low self-efficacy would discourage such people. Thus, the Health Belief Model (HBM) is appropriate for this research study as the theory allows examination of how women respond to digitally communicated health information relating to reproductive health by fertility tracking applications through a series of considerations including beliefs about vulnerability, severity, benefits, barriers and cues to action that the health information is intended to convey through push notifications, reminders, ovulation predictions and articles in Delta State, Nigeria.

## **METHODS**

The study utilized a descriptive survey research design because it enabled the researchers to collect information from women about their use of fertility tracking applications as a digital health communication channel and the effect of reproductive health information communicated through these applications on women's behavior in ovulation tracking. The population of this research is women of reproductive age, 15 - 49 years, in Asaba, Delta State.

According to the 2006 National Population and Housing Census conducted by the National Population Commission (NPC), Asaba had a female population of 149,603. Since Nigeria has not conducted another national census after 2006, the population was projected to 2026 using the NPC's annual population growth rate of 2.8%. Based on this projection, Asaba is estimated to have about 258,000 women. Of this number, about 47% are women aged 15–49 years, which is the childbearing age group. This gives an estimated target population of approximately 60,000 women for this study. Asaba was selected as the study area because it is the capital of Delta State and one of the fastest-growing urban centers in southern Nigeria, with high levels of urbanization, internet

Penetration, smartphone ownership, and access to digital health technologies. In addition, the city has a large population of educated and employed women, numerous higher institutions and health facilities, and well-developed telecommunication infrastructure, making it an appropriate location for investigating the use of fertility tracking applications as digital health communication tools among women of reproductive age, with findings expected to provide useful insights for digital reproductive health users and practitioners.

The sample size for the study was calculated using the Taro Yamane formula (1967) at a 5% significance level, yielding 397 respondents. Convenience sampling was employed to ensure that all women of childbearing age, aged 15 to 49 years, living in the Asaba metropolis had an equal and independent chance of being included in the sample. Data collection involved a structured questionnaire consisting of two sections.

Section A focused on the demographic profile of respondents, whilst Section B captured items on usage of Fertility tracking applications by women in the age group 18-49 years; fertility health information content derived from fertility tracking applications; women's exposure to and use of fertility tracking applications' information and the influence of this content on their ovulation monitoring practice.

A four-point Likert scale was used in this study, with response options: Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD). A mean score was used to analyse the responses, while 2.50 served as the benchmark for accepting or rejecting each questionnaire item. Both Google Forms and printed questionnaires were used to collect data in order to reach more eligible respondents and improve the response rate. A total of 397 copies of the questionnaire were administered to women who met the study criteria, and all were successfully retrieved, yielding a response rate of 100%. The data were analyzed using descriptive statistics, specifically mean and standard deviation. The mean was used to determine respondents' views on each item, while the standard deviation showed how closely or widely the responses were distributed. The results were presented in tables and interpreted using the 2.50 decision benchmark. The questionnaire was also validated by professionals in the field of Mass Communication and those experienced in digital reproductive health to allow a check of the coverage and scope of the study.

objective and variables to be studied. Comments and inputs were addressed to revise it to the original version before distribution for the main study. The reliability of the instrument was tested by giving the questionnaire to 40 women of reproductive age, excluding those being part of the study as a pre-test, their responses was assessed by calculating the alpha Cronbach and reliability coefficient of 0.81 were received which show good level of internal consistency for the study instrument

Ethical principles were strictly followed throughout the study. Before completing the questionnaire, all respondents were informed of the study's purpose and provided informed consent to participate. Participation was voluntary, and all information provided was treated as confidential and used only for academic purposes. To protect participants' privacy, no personal information such as names, telephone numbers, or specific residential locations in Asaba was collected. The findings were reported only in summary form to ensure that no individual respondent could be identified. All ethical requirements for conducting the research were fully observed.

## RESULTS AND DISCUSSION

**Table 1.**

| <b>Statement</b>                                                                                                 | <b>SA (%)</b> | <b>A (%)</b> | <b>D (%)</b> | <b>SD (%)</b> | <b>Mean</b> | <b>Std. Dev.</b> | <b>Decision</b> |
|------------------------------------------------------------------------------------------------------------------|---------------|--------------|--------------|---------------|-------------|------------------|-----------------|
| I frequently receive information about ovulation through fertility tracking applications.                        | 157 (39.5)    | 149 (37.5)   | 57 (14.4)    | 34 (8.6)      | 3.08        | 0.93             | Accepted        |
| Fertility tracking applications regularly provide me with reproductive health information.                       | 154 (38.8)    | 151 (38.0)   | 58 (14.6)    | 34 (8.6)      | 3.07        | 0.92             | Accepted        |
| I receive regular notifications and reminders about reproductive health from fertility-tracking applications.    | 152 (38.3)    | 150 (37.8)   | 60 (15.1)    | 35 (8.8)      | 3.05        | 0.94             | Accepted        |
| Fertility tracking applications frequently provide educational information on menstrual and reproductive health. | 150 (37.8)    | 151 (38.0)   | 60 (15.1)    | 36 (9.1)      | 3.04        | 0.95             | Accepted        |
| <b>Aggregate Mean/SD</b>                                                                                         |               |              |              |               | <b>3.06</b> | <b>0.94</b>      | <b>Accepted</b> |

*Extent of Women's Exposure to Reproductive Health Information Communicated through  
Fertility Tracking Applications in Delta State (n = 397)*

Source: Field Survey 2026

Table 1 shows that the knowledge of reproductive health information in the fertility applications by women in Delta State is quite extensive because the respondents strongly agreed that they often provide information on ovulation, reproductive health, and menstruation in each cycle, as well as periodic reminders.

**Table 2.**

| <b>Statement</b>                                                                                                                         | <b>SA (%)</b> | <b>A (%)</b> | <b>D (%)</b> | <b>SD (%)</b> | <b>Mean</b> | <b>Std. Dev.</b> | <b>Decision</b> |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------|--------------|---------------|-------------|------------------|-----------------|
| I carefully read the reproductive health information provided by fertility tracking applications.                                        | 156 (39.3)    | 149 (37.5)   | 58 (14.6)    | 34 (8.6)      | 3.08        | 0.92             | Accepted        |
| I pay attention to reproductive health notifications sent by fertility tracking applications.                                            | 154 (38.8)    | 150 (37.8)   | 58 (14.6)    | 35 (8.8)      | 3.06        | 0.93             | Accepted        |
| I use the reproductive health information obtained from fertility tracking applications when making decisions about my menstrual health. | 151 (38.0)    | 151 (38.0)   | 60 (15.1)    | 35 (8.8)      | 3.05        | 0.94             | Accepted        |
| I regularly follow the health advice communicated through fertility tracking applications.                                               | 149 (37.5)    | 151 (38.0)   | 61 (15.4)    | 36 (9.1)      | 3.04        | 0.95             | Accepted        |
| <b>Aggregate Mean/SD</b>                                                                                                                 |               |              |              |               | <b>3.06</b> | <b>0.94</b>      | <b>Accepted</b> |

*Women's Level of Engagement with Reproductive Health Information Communicated through Fertility Tracking Applications in Delta State (n = 397)*

*Source: Field Survey, 2026.*

As shown in Table 2, participants actively engaged with the reproductive health information provided by fertility tracking applications. Participants responded favorably to the assertion that they read fertility-tracking health information closely, paid attention to health reminders in applications, applied reproductive health information to decision-making, and practiced the reproductive health advice received through applications. Each of these was above 3.0 mean rating, with an aggregate mean of 3.06 signifying engagement.

**Table 3.**

| Statement                                                                                                                                | SA<br>(%)     | A (%)         | D (%)        | SD<br>(%)   | Mean        | Std.<br>Dev. | Decision        |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|--------------|-------------|-------------|--------------|-----------------|
| The reproductive health information I receive through fertility tracking applications encourages me to monitor my ovulation regularly.   | 159<br>(40.1) | 148<br>(37.3) | 56<br>(14.1) | 34<br>(8.6) | 3.09        | 0.92         | Accepted        |
| Exposure to reproductive health information has improved my ability to identify my fertile period.                                       | 156<br>(39.3) | 149<br>(37.5) | 58<br>(14.6) | 34<br>(8.6) | 3.08        | 0.92         | Accepted        |
| The information communicated through fertility tracking applications has improved my ovulation monitoring practices.                     | 154<br>(38.8) | 150<br>(37.8) | 58<br>(14.6) | 35<br>(8.8) | 3.06        | 0.93         | Accepted        |
| I now monitor my ovulation more consistently because of the reproductive health information provided by fertility tracking applications. | 151<br>(38.0) | 151<br>(38.0) | 59<br>(14.9) | 36<br>(9.1) | 3.05        | 0.94         | Accepted        |
| <b>Aggregate Mean/SD</b>                                                                                                                 |               |               |              |             | <b>3.07</b> | <b>0.93</b>  | <b>Accepted</b> |

*Perceived influence of exposure to reproductive health information communicated through fertility tracking applications on women's ovulation monitoring behavior (n = 397)*

*Source: Field Survey, 2026.*

Table 3 reveals that the delivery of reproductive health information through fertility tracking applications had a strong effect on Women's knowledge of ovulation monitoring practices. The range for the means from 3.05 to 3.09 reflects an agreement among

respondents that delivery of information increased their frequency of ovulation monitoring, enhanced their knowledge of fertile periods, and improved the frequency of ovulation tracking.

The first research objective sought to investigate women's exposure to reproductive health information through fertility tracking apps in Delta State, Nigeria. Results indicated high exposure, with an aggregated mean of 3.06, suggesting that respondents were frequently exposed to information about ovulation, menstruation, fertile cycles, and other aspects of reproductive health through the applications. This suggests that fertility tracking apps are no longer limited to tracking menstrual periods and ovulation and have evolved into important digital health communication platforms that deliver reproductive health information.

These findings are consistent with Nwafor, Muoboghare, and Osafire (2022) that female undergraduate students frequently use the Flo application to obtain information about their menstruation cycles, ovulation, and managing fertile periods, and also with the findings of Ogundipe, Adeleke, Adejuwon, Arowolo, Adelekè, and Fatoye (2025), where it was established that the adoption of digital technologies has increased women's access to reproductive health information in Nigeria.

In a like manner, Earle, Marston, Hadley, and Banks (2021) and McConnell et al. (2024) established that tracking women's cycles with an application has been a good source of educating women regarding reproductive health since many of the applications offer updates of the women's health information, tracking cycle of the period, and updating them. This has also been supported by Anenga et al. (2026) and Amir-ud-Din et al. (2026), who, in a systematic review, showed that the growing popularity of menstrual tracking applications increased female participants' access to reproductive health information in many countries. The second research objective aimed at investigating women's engagement with the reproductive health information delivered via fertility tracking apps. The result revealed a high exposure to the application's health promotion materials, with an aggregate mean score of 3.06.

This indicates that respondents carefully observed the application's communication related to reproduction. In addition, they heeded updates from the tracking app, took notifications into account, and adhered to all relevant instructions from the fertility tracker. This implies that the respondents not only received the information from the application and recorded

their mensuration period from the tracking app, they actively engaged with the health messages that were delivered by the app. This is consistent with Blair, Morgan, and McLernon (2021), who report that engagement is generally high, as women use the apps to gain insights they consider useful for cycle, lifestyle, and conception planning.

This finding also corroborates Figueiredo, Ankrah, Powell, Epstein and Chen (2024) who stated that sharing a user with the most personalized health advice promotes higher engagement for its user whereas, Köppert (2023) notes that the functionality of fertility tracking apps now includes a continuous loop with the user, functioning like digital personal assistants or customized communication tool, in their most popular forms. It therefore aligns with Ogundipe et al. (2025), who observe that better access to a wide array of knowledge has led to better decision-making. The third research objective was designed to assess the influence of women's exposure to reproductive health knowledge on their ovulatory tracking behavior.

The survey findings showed positive agreement that women with high exposure to reproductive health knowledge through the application had higher tendencies to track ovulation, as evidenced by an aggregate mean score of 3.07, suggesting a higher likelihood of tracking ovulation cycles and a more precise determination of fertile periods. However, care should be taken in interpreting this positive result. According to Altrichter (2026), the success of fertility mHealth relies on both user-centered design and users' individual needs. Kızılkaya, Ataman, and Şeremet (2026) have demonstrated how digital fertility information may not lead to a similar impact in behavior change. Also, in the case of algorithm-based fertility information, Wondrasek, Boucher, Dundee, Ryniec, and Esfandiari (2026) have demonstrated that there are advantages and disadvantages with that form of information. So, while this study suggests that app-based reproductive information is positively correlated with the intention to monitor ovulation, the presence of this information may not always translate into behavior change due to differences in information quality, app design, and individual user factors.

## CONCLUSION

This research investigated the influence of fertility tracking applications as digital health communication platforms on ovulation monitoring behaviour of women in Delta State of Nigeria.

The research established that women are well exposed to reproductive health information communicated through fertility tracking applications, it was also established that women of reproductive age actively participate in processing this information through reading health messages, attending to notifications and use of the information in their reproductive health management. Also, exposure to reproductive health information communicated through fertility tracking applications had an influence on women's ovulation monitoring behavior by enhancing the comprehension of their menstrual cycle and inculcating the practice of ovulation monitoring in women's lifestyle. Hence the fertility tracking applications have evolved into an effective digital health communication platform for shaping women's reproductive health practices positively

There are a few limitations of this study worth mentioning. First, respondents may have presented an overreport of actual fertility tracking application usage, ovulation monitoring practices because self-report data may be prone to biased responses. Second, the study sample was limited to reproductive-age women of Asaba, Delta State, and its generalization to other women in different regions and cities in Nigeria having varying demographics, cultures, socioeconomic and technological environments can be tricky. Thirdly, only descriptive statistical analyses (mean and standard deviation) were carried out in this study and no inferential statistical test were performed in order to determine the statistical significances or the strength of an association, relationship or correlation among the variable(s), thus the outcome is to be viewed as descriptive of respondents' claims and assertions and not proof of cause.

Drawing upon the findings of this study, we propose the following recommendations:

- 1) Fertility tracking application designers should increase access to and continued updates of evidence-based reproductive health content to resolve gaps between their content and female users' access to relevant data.
- 2) Health practitioners and public health authorities should implement interactive and individualized features so female users will use fertility applications to access reproductive health information more readily.
- 3) Public health agencies and reproductive health providers should advocate the use of consistent and approved fertility applications with displayed evidence of their use among women and improved monitoring over their menstrual cycle.

### **Declaration of AI**

The authors declare that no AI tool was used for preparing this manuscript except for language editing.

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