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Blog 1

Title

Can Smartphone Technology develop the early detection of Iron Deficiency Anemia (IDA)? A critical evaluation of AnemoCheck Mobile.

Introduction

Digital health technologies are developing the early detection process of different health conditions, including Iron Deficiency Anemia (IDA) which is one of the common health problems among the mass population globally. This blog critically evaluates the effectiveness of AnemoCheck Mobile, a smartphone-based technology, in early detection of IDA and promoting better health.

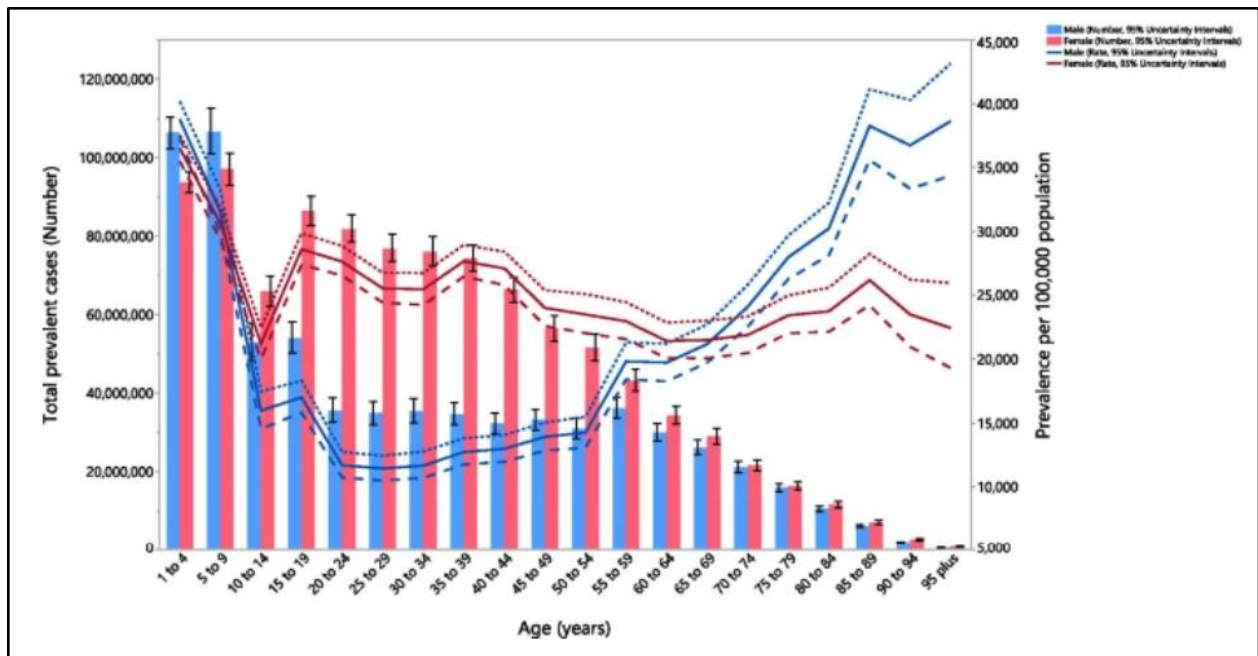


Figure 1: Total prevalence cases

(Source: Safiri et al., 2021)

Public Health Problem

IDA is one of the most common public health problems; Around 1.62 billion people globally (Burayu and Degefa, 2024). In the UK, 3% of men and 8% of women suffer from IDA which cause several health challenges like:

- Dizziness.
- Poor concentration.
- Weakness (Smith et al., 2024).

It indicates that IDA requires early detection and treatment for preventing health challenges.

How AnemoCheck Mobile is Used in Health Promotion

AnemoCheck Mobile, a smartphone-based application that is able to detect the haemoglobin level of individuals by analysing pictures of their fingernails (CureHHT, 2026). This mobile application encourages availing quick treatment for better health. By increasing awareness through early screening, this technology ensures timely treatment and prevention of IDA. It ensures a better health of users in the long run.



Figure 2: AnemoCheck Mobile

(Source: CureHHT, 2026)

Evidence That AnemoCheck Mobile Promotes Health

The evidence shows that AnemoCheck Mobile can easily identify the people who are suffering from IDA and need treatment or blood tests (InnoHealth, 2026). It is also found that the application provides early screening and recognises the requirement of laboratory testing. Around 70% of IDA patients use anemia detection applications (Das et al., 2024). The early screening of this app also

encourages users to get advice from healthcare professions. Following these ways, AnemoCheck Mobile promotes better control of IDA by enhancing awareness.

Critical Discussion

AnemoCheck Mobile has different advantages in the case of health promotion as it offers quick screening of IDA in the human body using smartphones. This application makes the screening process quicker which makes the screening process more accessible especially for the people living in rural areas. This early detection also encourages users to avail proper medical advice before reaching the serious condition (Makhmirzaeva et al., 2025). In contrast, its accuracy depends on lighting conditions, image quality, skin colour which is one of the negative factors of this technology (Hanlon et al., 2022). Data security threat could be one more challenge faced by this application as it is based on smartphone technology (Bubukayr and Almaiah, 2021). Therefore, although AnemoCheck Mobile is a useful technology, its effectiveness is dependent on privacy concerns. Also, it should be used alongside medical processes rather than solely depending on it.

Addressing the Shortfalls

This technology can be further developed by integrating advanced AI to ensure high accuracy under different lighting conditions and for different skin tones. The developers should also ensure stronger data security to gain user trust.

Conclusion

AnemoCheck Mobile is one of the effective tools for detecting Anemia. However, it needs further improvement as it faces challenges in getting accurate results in challenging situations like low lighting conditions, different skin tones.

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Blog 2

Title

Can AI improve Anemia prevention? Designing AnemoCare AI+ for Better Health Promotion.

Introduction

Iron Deficiency Anemia (IDA) affects millions of people globally and can reduce quality of life and health conditions. Although existing screening tools ensure early detection, still it requires improvement. This blog introduces AnemoCare AI+, a new digital technology, designed for prevention and management of Anemia.

Public Health Problem

Iron Deficiency Anemia continues to be one of the growing public health problems faced by a large number of people. A report shows that around 6% of the total UK population suffers from Anemia (News Medical, 2025). For Anemia, they face different physical challenges such as:

- Immune dysfunction.
- Fatigue.
- Lowering physical ability (Mitterstiller et al., 2022).

These consequences and large number of affected audiences indicates that this is a highly serious health problem that requires control and proper management.

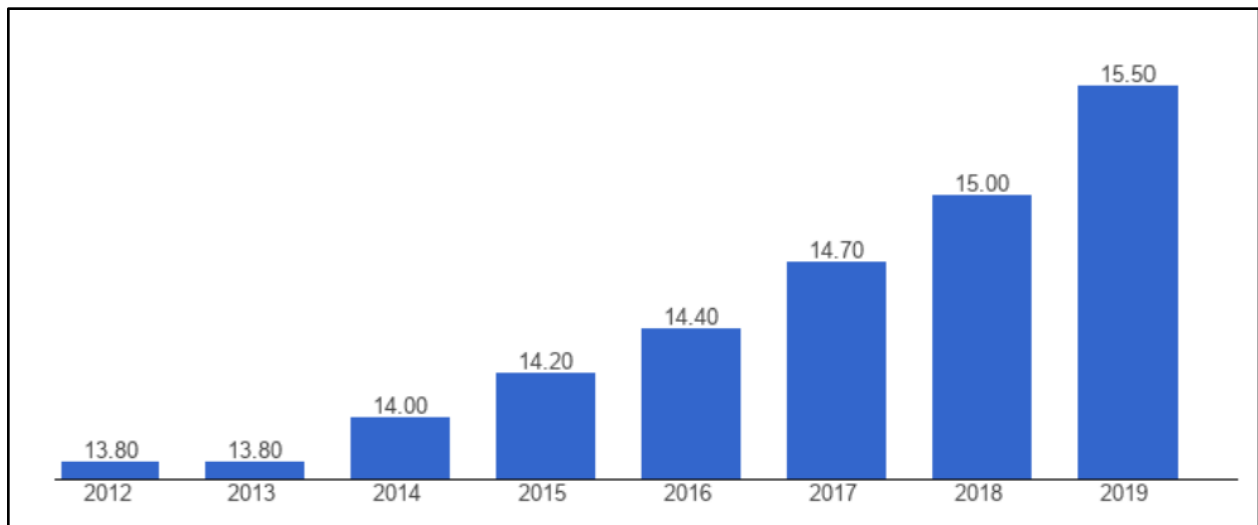


Figure 1: Anemia growth rate

(Source: The Global Economy, 2026)

Description of the Designed Technology

AnemoCare AI+ is the updated and modified version of AnemoCheck Mobile designed for improving the management and prevention of IDA. It creates proper integration between AI technology and Smartphone camera to recognise the level of haemoglobin by analysing the image of fingernails. This app also collects information about diet, health history that is able to provide more personalised results. Based on the findings about the individuals' health, this application provides advice on iron-rich foods for proper diet. The integration of AI also allows users to get accurate information under any lighting conditions and skin tones.

How the Designed Technology Promotes Health:

AnemoCare AI+ promotes health wellbeing by helping users identify the IDA in the early stage. It also promotes wellbeing by suggesting proper diet advice to users as per their needs which ensure the health wellbeing of users (Ashton et al., 2023). This technology supports the COM-B behaviour change model by improving knowledge of users, motivating them to manage health and encouraging healthy behaviour (Murphy et al., 2023). Following this way, this designed technology promotes the wellness of population's health.



Figure 2: Digital technology for Anemia detection

(Source: ET Government, 2026)

Critical Discussion

AnemoCare AI+ has different advantages as the technology supports getting accurate results about Anemia detection even under critical circumstances like different lighting conditions and for various skin tones. Users can easily share their report with the healthcare professionals from the mobile app that will enhance the effectiveness of the healthcare services (Free et al., 2013). Also, there are some limitations as it could raise the chances of data breach issues due to the dependence on AI technology (Ansari et al., 2022). Also, the people with limited digital skills can face challenges in operating the app.

Addressing the Shortfalls

Developers must ensure high encryption of data to prevent the data breach issue that will develop trust of users (Enjam, 2021). Also, to address the shortcomings, developers must create a user-friendly interface to ensure everyone can use it easily.

Conclusion

AnemoCare AI+ is the updated version of the existing technology which ensures highly accurate results for anemia detection under different challenging circumstances. It also allows sharing reports with healthcare professionals that develops healthcare service quality.

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