
Analysis Of Generation Z's Online Medication Purchasing Behavior

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Abstract

The digital age has transformed the way Generation Z (Gen Z) accesses healthcare services, including obtaining medications. The phenomenon of “kereta kuning” purchasing medications through e-commerce platforms and social media has become a significant trend due to its convenience, privacy, and competitive prices. However, this convenience poses serious health risks. This article aims to provide a narrative review of online medication purchasing behavior among Gen Z and its impact on patient safety. We conducted a literature review by collecting scientific journals from leading platforms such as Google Scholar, CrossRef, and PubMed in English. Analysis of the literature reveals that low digital health literacy and a tendency to self-diagnose based on viral content are driving Gen Z to consume prescription medications without medical supervision. Key risks include the circulation of substandard or counterfeit drugs, a lack of accurate dosage information, and the absence of pharmacists in clinical screening. Although digital access offers efficiency, without strict regulations and adaptive education tailored to Gen Z's lifestyle, this trend could become a public health “disaster” in the future.

Keywords: Generation Z, Online Medication Purchasing, E-commerce, Patient Safety, Health Literacy.

INTRODUCTION

Digital transformation has fundamentally changed the way people access health services, including the procurement of medicines through the integration of information technology and digital platforms (Emmert-Streib, 2020; Tanniru et al., 2021). Generation Z who were born and raised in a digital environment showed the highest adoption rate of internet-based health technology. Literature studies show that more than 50% of Gen Z respondents rely on digital sources as their primary source for health information (Jiao Wen et al., 2023). This behavior reflects a paradigm shift from traditional healthcare systems to a more flexible and fast digital model (Buis, 2019; Oyenuga et al., 2020).

The phenomenon of online shopping in e-commerce and social media shows how purchasing decisions, including for medicines, are increasingly influenced by digital social factors such as user reviews and influencers (Mansoor & Paul, 2022; Theocharis et al., 2025). This is in line with the findings that Gen Z processes information socially rather than solely based on scientific validity (Hassoun et al., 2023). However, this ease of access also has serious consequences for patient safety. The low ability to evaluate the quality of digital health information increases the risk of improper use of drugs (Algifari et al., 2024). Exposure to misinformation on social media exacerbates this problem, especially among young people (Farooq et al., 2021; Nasier et al., 2021). With the increase in drug purchases online it is shown that understanding the formation of these behaviors and their implications for patient safety is critical. Therefore, this article aims to provide a comprehensive analysis based on the current literature on the phenomenon that occurs.

Based on this background, this article aims to provide a comprehensive review of the phenomenon of buying drugs online among Generation Z using a narrative review approach. Specifically, the goal is to analyze the behavioral patterns of Gen Z in seeking and purchasing medicines through digital platforms including e-commerce and social media, which are increasing along with the development of digital health technologies (Arikpo et al., 2023; PMC, 2024).

Then identify the determining factors that influence the decision to purchase drugs online, such as digital health literacy, ease of access, price, the influence of social media, and peer influence (Hassoun et al., 2023; Mardiana et al., 2024; Puspita et al., 2024). Furthermore, evaluate the risks faced to patient safety, including self-medication practices, drug abuse, and potential exposure to

counterfeit or low-quality drugs (Haestuti et al., 2024; Khairunnisa et al., 2021; Millatussa'adah et al., 2024).

RESEARCH METHODS

Article uses literature review as the primary approach by researching literature from various scientific databases such as PubMed, Scopus, ScienceDirect, and Google Scholar. Literature study is a research method that aims to analyze, review, and summarize various theories from various literature relevant to research. This method can allow for an in-depth exploration of complex phenomena involving behavioral, technological, and health aspects. The search strategy uses keywords such as "online pharmacy," "digital health literacy," "Gen Z health behavior," and "self-medication." The selected articles were published between 2020 and 2025.

RESULTS AND DISCUSSION

Generation Z shows a strong tendency to seek health information through the internet and social media. The frequency of use of digital platforms for health purposes correlates with the level of digital health literacy (Jiao Wen et al., 2023). However, unlike previous generations, Gen Z's information-seeking behavior is not always driven by medical aspects but is often influenced by social factors and digital trends (Hassoun et al., 2023). This change is leading to a shift from evidence-based decision-making to social-based decision-making (Mansoor & Paul, 2022; Sutha et al., 2026). In addition, the high intensity of internet use increases the tendency to buy drugs online without medical consultation, mainly due to convenience and speed (Mardiana et al., 2024; Theocharis et al., 2025).

Social media platforms and e-commerce have become the main source of health information for Gen Z. Although these platforms facilitate access to information, the quality of the information circulating is often not scientifically verified (Nasier et al., 2021; Sari & Handayani, 2023). Research shows that online shopping behavior in Gen Z is particularly vulnerable to impulse buying triggered by the ease of access to paylater, the visual quality of the platform, and viral reviews (Septiane & Purmono, 2023). This causes pharmaceutical commodities such as vitamins, supplements, and non-prescription drugs to be purchased on the basis of digital stimulation rather than rational medical needs (Haestuti et al., 2024; Mardiana et al., 2024).

Digital health literacy refers to an individual's ability to search, understand, and evaluate health information from electronic sources. Although Gen Z has high technological proficiency (digital natives), many studies show that they still face difficulties in critically evaluating the validity of health information (Algifari et al., 2024; Jiao Wen et al., 2023). Only a small percentage of individuals can critically assess the reliability of the drug information they purchase (Hassoun et al., 2023). In Indonesia, pharmacy students themselves who have scientific provisions still show a varied correlation between the level of e-health literacy and the sharpness of searching for online health information (Puspita et al., 2024). Low literacy directly increases the risk of drug abuse and poor health decision-making (Puspita et al., 2024).

Buying medication online without the supervision of a healthcare professional carries some serious risks. One of the main risks is the use of prescription drugs without proper authorization, which can trigger toxic side effects, antimicrobial resistance, and fatal complications (Arikpo et al., 2023). In addition, low digital health literacy increases the likelihood of dosing errors (Algifari et al., 2024). This problem is exacerbated by drug transactions on non-pharmaceutical (illegal) public e-commerce platforms, which increase the chances of substandard, defective, or counterfeit drug commodities entering the hands of consumers in the absence of prescription screening and education from pharmacists (Khairunnisa et al., 2021; Millatussa'adah et al., 2024).

This phenomenon highlights the need for strategic interventions in healthcare systems, especially to increase digital health literacy among young people. Technology-based education and the integration of healthcare professionals (such as pharmacists) into digital platforms are important steps to reduce risk (Oyenuga et al., 2020; Tanniru et al., 2021).

Pharmacists are required to proactively present creative educational content on social media to compensate for health misinformation (Haestuti et al., 2024). In addition, strict law enforcement and supervision of electronic drug circulation in Indonesia must be implemented to ensure legal and clinical protection of patients (Khairunnisa et al., 2021).

CONCLUSIONS

The online drug purchase behavior by Generation Z is a consequence of the digital transformation in the health system. While it provides convenience, this digital transformation also poses a significant risk to patient safety, especially due to the low digital health literacy and strong influence of social media. Generation Z tends to rely on digital information in making health decisions but doesn't always have the ability to evaluate the quality of that information. This increases the risk of improper use of the drug. Therefore, a comprehensive approach is needed including digital health literacy education, strengthening regulations, and the integration of healthcare professionals into the digital ecosystem to ensure the safety and effectiveness of healthcare in the digital age.

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