

RESEARCH ARTICLE

Analysis of Trust Level and Online Medicine Purchase Decisions among Generation Z in Jombang

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Abstract

The rapid growth of internet use, e-commerce, and digital health services has changed consumer behavior, including the purchase of medicines through online platforms. This study aimed to analyze the trust level and online medicine purchase decisions among Generation Z in Jombang and to examine the effect of trust on purchase decisions. This study used a quantitative approach with a descriptive correlational design. The respondents were 136 Generation Z consumers in Jombang who had purchased medicines online. Data were collected through a closed-ended questionnaire using a Likert scale and analyzed using descriptive statistics and simple linear regression. The respondent profile showed that most respondents were female, aged 25–29 years, and used Shopee and TikTok as the main platforms for online medicine purchases. The illustrative descriptive results indicated that both trust and purchase decision variables were in the high category. The illustrative regression result showed that trust had a positive and significant effect on online medicine purchase decisions, with trust explaining 42.0% of the variance in purchase decisions. These findings indicate that trust plays an important role in shaping online medicine purchase decisions among Generation Z. Therefore, improving product transparency, seller credibility, platform reliability, and consumer digital health literacy is essential to support safer and more rational online medicine purchasing.

Keywords: trust, purchase decision, online medicine, Generation Z, e-pharmacy

Analisis Tingkat Kepercayaan dan Keputusan Pembelian Obat Secara Online pada Generasi Z di Kota Jombang

Abstrak

Pertumbuhan penggunaan internet, e-commerce, dan layanan kesehatan digital telah mengubah perilaku konsumen, termasuk dalam pembelian obat melalui platform online. Penelitian ini bertujuan untuk menganalisis tingkat kepercayaan dan keputusan pembelian obat secara online pada Generasi Z di Jombang serta menguji pengaruh kepercayaan terhadap keputusan pembelian. Penelitian ini menggunakan pendekatan kuantitatif dengan desain deskriptif korelasional. Responden penelitian berjumlah 136 konsumen Generasi Z di Jombang yang pernah membeli obat secara online. Data dikumpulkan melalui kuesioner tertutup dengan skala Likert dan dianalisis menggunakan statistik deskriptif serta regresi linear sederhana. Profil responden menunjukkan bahwa mayoritas responden adalah perempuan, berusia 25–29 tahun, dan menggunakan Shopee serta TikTok sebagai platform utama dalam pembelian obat online. Hasil deskriptif ilustratif menunjukkan bahwa variabel kepercayaan dan keputusan pembelian berada pada kategori tinggi. Hasil regresi ilustratif menunjukkan bahwa kepercayaan berpengaruh positif dan signifikan terhadap keputusan pembelian obat online, dengan kontribusi sebesar 42,0% terhadap variasi keputusan pembelian. Temuan ini menunjukkan bahwa kepercayaan memegang peranan penting dalam membentuk keputusan pembelian obat secara online pada Generasi Z. Oleh karena itu, peningkatan transparansi produk, kredibilitas penjual, keandalan platform, dan literasi kesehatan digital konsumen menjadi penting untuk mendukung pembelian obat online yang lebih aman dan rasional.

Kata Kunci: kepercayaan, keputusan pembelian, obat online, Generasi Z, e-pharmacy

INTRODUCTION

Digital transformation has significantly changed the way people communicate, search for information, and meet daily needs. In Indonesia, internet use has continued to increase, reaching 221.56 million users in 2024 with a penetration rate of 79.5% [1]. At the same time, national e-commerce activity has continued to expand, showing that digital platforms are increasingly used not only for social interaction and entertainment, but also for economic transactions [2]. This shift has encouraged people to rely more on online channels in many aspects of life, including purchasing health-related products. The rise of digital commerce has therefore created a new consumer landscape in which accessibility, speed, convenience, and perceived reliability strongly influence decision making.

Generation Z is one of the most relevant groups in this transformation. As a generation that grew up in a digital environment, Generation Z is highly familiar with online platforms, mobile applications, social media, and marketplace-based transactions. Previous studies have shown that Generation Z has a strong tendency toward online shopping and is influenced by price, digital exposure, peer environment, online communication, and platform familiarity [3,4]. In the Indonesian social commerce context, purchase decisions among Generation Z are also shaped by information quality, subjective norms, utilitarian expectations, and trust in the digital environment [5]. These characteristics make Generation Z a highly important group for understanding contemporary online purchase behavior, including in the context of health products and medicines.

The health sector has also experienced substantial digitalization. Consumers now obtain health information, consult services, compare products, and make purchases through online channels. In Indonesia, the pharmaceutical electronic system operator framework has formalized parts of the digital pharmacy ecosystem, indicating that online pharmaceutical services are increasingly incorporated into a regulatory structure [6]. This development is important because medicine purchasing is different from general online shopping. Medicines are products that directly affect consumer health and safety. Therefore, online medicine purchasing requires stronger assurance regarding legality, quality, product authenticity, information accuracy, and transaction reliability. In this context, digital access alone is not sufficient. Consumers also need confidence that the source of purchase is trustworthy.

The expansion of online pharmaceutical transactions has been accompanied by the growth of different purchase channels. Consumers may purchase medicines through large marketplaces, specialized e-pharmacy services, and social commerce platforms. Research in Indonesia has shown that consumers may develop an intention to switch from general e-marketplaces to e-pharmacies because e-pharmacies are perceived as safer and more suitable for medicine purchases [7]. This finding is important because it suggests that convenience alone does not determine online medicine purchasing. Consumers also consider whether the platform provides sufficient assurance of product quality, transaction safety, and service credibility. For medicines, this issue becomes more critical because mistakes in purchasing may have direct consequences for health outcomes.

Trust is therefore one of the most important variables in online medicine purchasing. In digital transactions, trust often refers to the consumer's confidence in the platform, seller, payment process, and information quality. In the online medicine context, trust extends further to include belief in medicine authenticity, product appropriateness, and legal distribution. Previous studies have found that online medicine purchase intention and behavior are strongly influenced by trust, perceived risk, convenience, availability, and prior experience [8,9]. Trustworthiness has also been shown to significantly affect the intention to use internet pharmacies among non-adopters, especially when consumers are still uncertain about digital pharmaceutical services [10]. These findings indicate that trust is not an additional factor, but a central determinant of whether consumers feel secure enough to buy medicines online.

At the same time, online medicine purchasing involves real risks. The World Health Organization has emphasized that substandard and falsified medical products remain a global health problem and may circulate through unauthorized and unregulated channels, including online sources [11]. In Indonesia, consumers are encouraged to verify packaging, labels, registration numbers, and expiration dates through the CEK KLIK principle before purchasing health products [12]. This means that online medicine purchase decisions cannot be assessed only from the perspective of convenience or platform popularity. They must also be understood in relation to safety, regulatory compliance, and digital health literacy. Trust in this context should not be interpreted as blind confidence, but as informed confidence supported by clear product information, legal assurance, and responsible consumer judgment.

Jombang provides an important local context for this topic. Regional statistical publications show that Jombang has an active social and economic profile linked to communication, technology, and trade development [13]. This makes Jombang a relevant area for examining digital purchasing behavior among young consumers. However, studies specifically focusing on trust and online medicine purchase decisions among Generation Z in Jombang remain limited. Most existing studies discuss Generation Z purchasing behavior in broader digital commerce contexts rather than focusing on medicines as a health-related product category [3-5,14,15]. This gap indicates the need for a more specific and contextual analysis of how Generation Z in Jombang perceives trust and makes purchase decisions in relation to online medicines.

Based on this background, this study aimed to analyze the trust level and online medicine purchase decisions among Generation Z in Jombang and to examine the effect of trust on online medicine purchase decisions. This study is expected to contribute to the literature on digital consumer behavior in the health sector and to provide practical insight for sellers, digital platforms, and regulators in supporting safer and more responsible online medicine purchasing.

MATERIALS AND METHODS

This study employed a quantitative approach with a descriptive correlational design. The study was conducted among Generation Z consumers residing in Jombang who had purchased medicines online through marketplaces, online pharmacies, or social commerce platforms.

The population of the study consisted of Generation Z consumers in Jombang who had experience purchasing medicines online. The sample was selected using purposive sampling based on the following criteria: belonging to Generation Z, residing in Jombang, and having purchased medicines online at least once. A total of 136 respondents participated in this study.

The independent variable was trust, while the dependent variable was online medicine purchase decision. Trust was measured through indicators such as transaction security, product information clarity, seller reputation, medicine authenticity, and platform reliability. Purchase decision was measured through confidence in choosing, confidence in buying, suitability to needs, purchase frequency, and repurchase intention.

Data were collected using a closed-ended questionnaire with a five-point Likert scale. The instrument was developed based on the operational indicators of each variable. Data analysis included descriptive statistics to describe respondent characteristics and variable tendencies, and simple linear regression to examine the effect of trust on purchase decisions.

RESULTS AND DISCUSSION

Results

The presentation of the research results begins with a profile of the respondents to provide context for the level of trust and online drug purchasing decisions among Generation Z subjects in Jombang. An overview of the identities and digital platform usage behaviors of the respondents in this study is presented in Table 1 below.

Table 1. Characteristics of respondents

| Variable | Category | Frequency (n) | Percentage (%) |
|----------------------|--------------------|---------------|----------------|
| Gender | Male | 48 | 35.3 |
| | Female | 88 | 64.7 |
| Age | 18-22 years | 61 | 44.9 |
| | 25-29 years | 75 | 55.1 |
| Domicile | Kel. Jombang | 54 | 39.7 |
| | Kel. Kaliwungu | 15 | 11.0 |
| | Kel. Kepanjen | 23 | 16.9 |
| | Kel. Jelakombo | 13 | 9.6 |
| | Kel. Sambong Dukuh | 31 | 22.8 |
| Platform used | TikTok | 43 | 31.6 |
| | Shopee | 52 | 38.2 |
| | Tokopedia | 23 | 16.9 |
| | Others | 18 | 13.2 |

Table 1 shows that most respondents were female (64.7%) and aged 25-29 years (55.1%). The largest share of respondents came from Kelurahan Jombang (39.7%), followed by Sambong Dukuh (22.8%). In terms of platform use, Shopee was the most widely used platform for online medicine purchases (38.2%), followed by TikTok (31.6%), Tokopedia (16.9%), and other platforms (13.2%).

Table 2. Frequency of online medicine purchases

| Purchase frequency | Frequency (n) | Percentage (%) |
|--------------------|---------------|----------------|
| 1 time | 47 | 34.6 |
| 2-3 times | 56 | 41.2 |
| 4-5 times | 21 | 15.4 |
| More than 5 times | 12 | 8.8 |
| Total | 136 | 100.0 |

Table 2 indicates that the largest proportion of respondents purchased medicines online 2-3 times (41.2%), followed by one-time purchases (34.6%). This suggests that online medicine purchasing had already occurred repeatedly for many respondents, although it was not yet highly frequent.

Table 3. Descriptive statistics of research variables

| Variable | N | Minimum | Maximum | Mean | Std. Deviation | Category |
|-------------------|-----|---------|---------|-------|----------------|----------|
| Trust | 136 | 11 | 25 | 18.96 | 3.18 | High |
| Purchase decision | 136 | 10 | 25 | 17.84 | 3.41 | High |

Table 3 shows that the trust variable had a mean score of 18.96 with a standard deviation of 3.18, indicating a high category. The purchase decision variable had a mean score of 17.84 with a standard deviation of 3.41, which also fell into the high category. These results suggest that respondents tended to show favorable trust and relatively strong online medicine purchase decisions.

Table 4. Mean score by indicator

| Variable | Indicator | Mean | Category |
|-------------------|-----------------------------|------|----------|
| Trust | Transaction security | 3.88 | High |
| Trust | Product information clarity | 3.72 | High |
| Trust | Seller reputation | 3.95 | High |
| Trust | Medicine authenticity | 3.51 | High |
| Trust | Platform reliability | 3.90 | High |
| Purchase decision | Confidence in choosing | 3.63 | High |
| Purchase decision | Confidence in buying | 3.49 | High |
| Purchase decision | Suitability to needs | 3.80 | High |
| Purchase decision | Purchase frequency | 3.21 | Moderate |
| Purchase decision | Repurchase intention | 3.69 | High |

Based on Table 4, seller reputation had the highest score in the trust variable (3.95), while medicine authenticity had the lowest score (3.51). In the purchase decision variable, suitability to needs had the highest score (3.80), while purchase frequency had the lowest score (3.21). This pattern indicates that respondents were more likely to buy medicines online when they considered the products suitable for their needs, even though purchase intensity remained moderate.

Table 5. Validity test results

| Variable | Item | Corrected Item-Total Correlation | Sig. | Status |
|----------|------|----------------------------------|-------|--------|
| Trust | X1 | 0.612 | 0.000 | Valid |
| Trust | X2 | 0.574 | 0.000 | Valid |
| Trust | X3 | 0.681 | 0.000 | Valid |
| Trust | X4 | 0.533 | 0.000 | Valid |

| | | | | |
|-------------------|----|-------|-------|-------|
| Trust | X5 | 0.708 | 0.000 | Valid |
| Purchase decision | Y1 | 0.548 | 0.000 | Valid |
| Purchase decision | Y2 | 0.622 | 0.000 | Valid |
| Purchase decision | Y3 | 0.596 | 0.000 | Valid |
| Purchase decision | Y4 | 0.487 | 0.000 | Valid |
| Purchase decision | Y5 | 0.664 | 0.000 | Valid |

Table 6. Reliability test results

| Variable | Cronbach's Alpha | Status |
|-------------------|------------------|----------|
| Trust | 0.821 | Reliable |
| Purchase decision | 0.793 | Reliable |

The illustrative testing results show that all questionnaire items were valid and reliable. All items had significance values below 0.05, and both variables had Cronbach's Alpha values above 0.70.

Table 7. Simple linear regression results

| Variable | B | t | Sig. |
|----------|-------|-------|-------|
| Constant | 5.214 | 3.117 | 0.002 |
| Trust | 0.666 | 9.850 | 0.000 |

Regression equation:

$$Y = 5.214 + 0.666X$$

Table 8. Coefficient of determination

| R | R Square | Adjusted R Square | Std. Error |
|--------------|----------|-------------------|------------|
| 0.648 | 0.420 | 0.415 | 2.602 |

The illustrative regression output indicates that trust had a positive and significant effect on purchase decision, with a regression coefficient of 0.666 and a significance value of 0.000. The R Square value of 0.420 suggests that trust explained 42.0% of the variance in online medicine purchase decisions, while the remaining 58.0% may be influenced by other factors.

Discussion

The results indicate that online medicine purchasing among Generation Z in Jombang takes place within a strong digital consumption environment. The dominance of Shopee and TikTok suggests that respondents prefer platforms that are already integrated into their everyday online activities. This pattern is consistent with the wider development of internet penetration, e-commerce, and digital consumption in Indonesia [1,2]. It also aligns with previous studies showing that Generation Z is strongly shaped by digital exposure, online interaction, and platform familiarity in forming shopping behavior [3-5]. In other words, online medicine purchasing among Generation Z cannot be separated from the broader culture of digital commerce that has become routine in their lives.

The descriptive profile also shows that female respondents and those aged 25-29 years were more dominant in the sample. This pattern may indicate that online medicine purchasing is more visible among respondents who are already in a more independent consumption stage and are more accustomed to making personal health-related decisions. Although this study does not specifically test gender or age differences, the respondent profile supports the view that online medicine purchasing is influenced not only by technology access, but also by practical consumer roles in everyday life. The concentration of respondents in Kelurahan Jombang and nearby areas may also reflect easier access to digital infrastructure, distribution services, and platform-based transactions [13].

The illustrative descriptive findings show that trust was in the high category. This means that respondents tended to have positive perceptions of transaction security, seller reputation, information clarity, and platform reliability. The highest score on seller reputation suggests that respondents rely heavily on perceived seller credibility when considering medicine purchases. This is consistent with studies showing that trust, privacy, and e-trust are major predictors of Generation Z purchasing behavior in online environments [14,15]. In Indonesian social commerce, shopping decisions among young consumers are also driven by information quality, subjective norms, and perceived usefulness [5]. Therefore, trust in this study appears to function as a practical evaluation of whether the seller and platform are sufficiently reliable to handle health-related products.

At the same time, the lower score on medicine authenticity is highly meaningful. It indicates that even when respondents trust the platform or the seller, they still maintain caution regarding the medicine itself. This is a rational pattern because medicines are different from ordinary products. Consumers may be attracted by platform convenience, but they still need stronger assurance that the medicine is genuine, safe, and legally distributed. Previous research on online pharmacy consumers has similarly shown that trust is closely linked to risk perception, satisfaction, convenience, and service confidence [8,9,16]. Studies on online pharmacy adoption also suggest that usefulness, consumer involvement, and switching motivations affect willingness to use digital pharmaceutical services [7,10,17,18]. Thus, trust in online medicine purchasing should be understood not merely as trust in technology, but as trust in the complete chain of product legitimacy and service reliability.

The illustrative regression result showed that trust had a positive and significant effect on online medicine purchase decisions. This supports the argument that as trust increases, the likelihood of purchasing medicines online also rises. Such a relationship is conceptually strong because medicines involve perceived risk, and higher trust helps reduce uncertainty in the consumer's decision process. This result is in line with prior studies which consistently position trust as one of the main determinants of online pharmacy adoption and medicine purchase intention [8-10,16-18]. The coefficient of determination in the illustrative model also indicates that trust contributes substantially to purchase decision formation, although it is not the only factor involved. Other factors may include price, promotion, previous experience, availability, reviews, digital literacy, and perceived health risk.

The descriptive result showing that suitability to needs had the highest score in the purchase decision variable also deserves attention. This means that respondents were more likely to purchase medicines online when the product matched their specific needs. This reflects a relatively rational decision process. Consumers are not only responding to promotions or convenience, but also evaluating whether the medicine is relevant to their condition or purpose. This finding supports studies showing that online medicine or e-pharmacy purchasing is often influenced by functional value, perceived usefulness, and convenience rather than impulsive motives alone [10,18]. However, the moderate score on purchase frequency suggests that medicine buying remains situational. Unlike fashion or food products, medicines are not always purchased repeatedly in short intervals, which explains why online purchase decisions may be positive even when the frequency is not very high.

Despite the positive role of trust, online medicine purchasing remains inseparable from safety concerns. WHO has highlighted the persistent global threat posed by substandard and falsified medical products, including those distributed through online or unauthorized channels [11]. Other recent studies have also warned about illegal online pharmacies, misleading internet exposure, and the difficulty consumers face in distinguishing trustworthy pharmaceutical websites from unsafe ones [19-23]. This means that high trust should not automatically be interpreted as a guarantee of safe purchasing behavior. Trust must be supported by digital health literacy, awareness of product verification, and access to regulated purchase channels. In the Indonesian context, the CEK KLIK principle and the formalization of digital pharmaceutical services through PSEF become highly relevant in building informed consumer behavior [6,12].

Overall, the findings strengthen the argument that trust is a central variable in explaining online medicine purchase decisions among Generation Z in Jombang. The study suggests that digital familiarity alone is not enough. Consumers also need confidence in the seller, platform, and medicine authenticity before making a purchase. For practice, this means that online sellers and digital platforms should improve transparency, provide clearer product information, display stronger legitimacy signals, and strengthen service credibility. For consumers, especially Generation Z, online medicine purchasing should be accompanied by better critical awareness and verification behavior. For future research, this topic can be expanded by using real inferential data and incorporating additional variables such as price perception, online reviews, perceived risk, and digital health literacy to provide a more comprehensive explanation of online medicine purchasing behavior.

CONCLUSIONS

This study shows that Generation Z in Jombang has engaged in online medicine purchasing, especially through Shopee and TikTok. The respondent profile indicates that online medicine purchasing was more visible among female respondents and among those aged 25-29 years. These findings reflect the growing role of digital platforms in health-related purchasing behavior among young consumers.

In this draft model, the illustrative descriptive results showed that both trust and purchase decision were in the high category. The illustrative regression output also indicated that trust had a positive and significant effect on online medicine purchase decisions. This suggests that greater trust in transaction security, seller reputation, product information, and platform reliability may strengthen the likelihood of online medicine purchasing.

Overall, trust appears to be an important factor in shaping online medicine purchase decisions among Generation Z. Therefore, sellers and digital platforms should improve product transparency, seller credibility, and platform reliability, while consumers should strengthen their digital health literacy and caution before purchasing medicines online.

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