



Factors Influencing Consumers' Willingness to Pay for Pure Honey in Ibadan, Oyo State, Nigeria

¹*KAREEM, AT; ¹ODUSANYA, TF; ¹ISOLA, JO; ²ADISA, AS

¹Federal College of Forestry, P. M. B. 5087, Ibadan, Oyo State, Nigeria

²Forestry Research Institute of Nigeria, P. M. B. 5054, Ibadan, Oyo State, Nigeria

*Corresponding Author Email: oriobatemyl@gmail.com

*ORCID ID: <https://orcid.org/0009-0009-1659-4775>

*Tel: +234 705 756 5616

Co-Authors Email: kareemaminat82@gmail.com; temyl@yahoo.ca; tiwaladeadebayo@gmail.com

ABSTRACT: The objective of this paper is to examine the factors influencing consumers' willingness to pay (WTP) for pure honey in Ibadan, Oyo State, Nigeria using appropriate standard methods of 266 consumers across ten marketplaces. Data collected show that the respondents are predominantly male consumers (60%), within the age group of 31–50 years (50%), with tertiary education attainment (50%) and earn monthly incomes between ₦50,000 and ₦100,000 (45%). Awareness of honey's health benefits (4.5) was found to be a strong driver of WTP, while product purity (4.7), taste (4.5), and packaging (4.0) were critical attributes influencing purchasing decisions. Market dynamics, including price (4.5) and availability (4.2), played significant roles in shaping consumer preferences. The study concluded that improving consumer awareness through education, enhancing product certification, and optimizing packaging design are key strategies for increasing WTP. The findings contribute to forest economics by providing valuable insights into consumer behavior and offering actionable recommendations for producers, marketers, and policymakers to foster a sustainable honey market in urban settings. Future research could explore similar patterns in other forest-derived products and rural areas

DOI: <https://dx.doi.org/10.4314/jasem.v28i12.54>

License: **CC-BY-4.0**

Open Access Policy: All articles published by **JASEM** are open-access articles and are free for anyone to download, copy, redistribute, repost, translate and read.

Copyright Policy: © 2024. Authors retain the copyright and grant **JASEM** the right of first publication. Any part of the article may be reused without permission, provided that the original article is cited.

Cite this Article as: KAREEM, A. T; ODUSANYA, T. F; ISOLA, J. O; ADISA, A. S (2024). Factors influencing consumers' Willingness to Pay for Pure Honey in Ibadan, Oyo State, Nigeria. *J. Appl. Sci. Environ. Manage.* 28 (12B Supplementary) 4389-4392

Dates: Received: 22 October 2024; Revised: 20 November 2024; Accepted: 08 December 2024; Published: 31 December 2024

Keywords: willingness to pay; pure honey; consumer behaviour; product attributes; market dynamics

Honey, a natural sweetener, is widely valued for its nutritional, medicinal, and economic benefits (Hasam *et al.*, 2020). Pure honey, in particular, has gained increasing attention due to its high quality and health benefits, including antioxidant, antibacterial, and anti-inflammatory properties (Majtan *et al.*, 2021).. However, despite its recognized value, the Nigerian honey market is often characterized by low consumer confidence, primarily due to adulteration and insufficient awareness about the benefits of pure honey. This issue not only affects consumer health but also undermines the livelihoods of small-scale honey producers. Addressing these concerns requires

an understanding of the factors influencing consumers' willingness to pay (WTP) for pure honey, especially in urban centers like Ibadan, Oyo State, where diverse consumer preferences and purchasing power coexist. The Nigerian honey industry faces challenges that threaten its sustainability, including adulteration, inadequate branding, and limited market access for genuine producers (Adenuga *et al.*, 2023). These issues discourage consumers from paying premium prices for pure honey, despite their willingness to invest in quality products for health and culinary uses (Hasam *et al.*, 2020). This scenario negatively impacts the incomes of honey producers

*Corresponding Author Email: oriobatemyl@gmail.com

*ORCID ID: <https://orcid.org/0009-0009-1659-4775>

*Tel: +234 705 756 5616

and retailers, particularly in rural and peri-urban areas. Understanding the factors influencing consumers' WTP for pure honey is crucial for designing interventions that boost consumer confidence, ensure fair pricing, and support sustainable honey production. The study holds both social and scientific value. Socially, it seeks to enhance consumer awareness and satisfaction while fostering a fair honey market that benefits producers and retailers. Scientifically, the study contributes to the growing body of literature on consumer behavior in emerging markets, providing evidence-based insights to guide policy formulation and market interventions. Previous studies have explored consumer behavior regarding honey in various contexts (Kabakci *et al.*, 2020; Zanchini *et al.*, 2022). For instance, research highlights that socio-demographic factors, such as income, education, and age, significantly affect consumers' preferences for pure honey (Sparacino *et al.*, 2022). Additionally, product attributes like taste, purity, and certification have been shown to play a vital role in consumer decision-making (Bukhari *et al.*, 2021). Studies in Nigeria, however, are sparse, and those available tend to focus on rural areas or overlook the interplay between consumer awareness and market dynamics in urban settings. Hence the objective of this paper is to examine the factors influencing consumers' willingness to pay (WTP) for pure honey in Ibadan, Oyo State, Nigeria

MATERIALS AND METHODS

Description of study area: This research was carried out in the lively and dynamic urban center of Ibadan, situated in Oyo State, Nigeria. Ibadan, the capital of Oyo State, Nigeria, is a diverse and strategic study area for research due to its blend of urban and semi-urban characteristics, rich demographic mix, and vibrant markets. The city's residents span various socio-economic backgrounds, providing insights into consumer behavior and purchasing patterns. Its markets, ranging from traditional to modern, offer a comprehensive view of product accessibility and market dynamics. With well-developed infrastructure, accessibility, and renowned research institutions like the University of Ibadan, the city is ideal for studies on consumer awareness, product attributes, and willingness to pay, particularly for agricultural products like honey.

Sample Collection: A multi-stage sampling approach was adopted to achieve a representative sample. Initially, consumers of packaged pure honey were identified, targeting locations where such products were available. In the next stage, ten marketplaces were randomly selected from a pool of fifteen

identified options. The use of simple random sampling ensured each marketplace had an equal and unbiased chance of being included in the study, thereby improving the representativeness of the sample and enabling broader generalizations to all marketplaces offering packaged pure honey.

Among the fifteen marketplaces identified as selling packaged pure honey, ten were randomly selected for the study. These marketplaces were chosen based on their higher demand for packaged pure honey, as indicated by sales data, customer footfall, and market analysis, which identified them as the most profitable and responsive locations for honey sales. Additionally, suppliers of packaged pure honey had stronger relationships and established contracts with vendors in these markets, making them priority distribution points. A simple random sampling method was employed to ensure fairness and equal opportunity for all marketplaces to be included in the study. This method enhanced the representativeness of the sample, allowing the findings to be generalized to all marketplaces selling packaged pure honey. The strategic selection aimed to capture a range of market dynamics within the Ibadan metropolis.

To address constraints related to time, resources, and accessibility, the study utilized convenience sampling, focusing on consumers who were most readily available in the selected marketplaces. A total of 266 pure honey consumers were interviewed, representing 82% of the sample frame of 317 pure honey consumers as identified by marketers in these marketplaces. The proportion of samples drawn from individual markets ranged between 76% and 88%. The sample size varied across the marketplaces due to the unwillingness of some consumers to participate, which reduced the number of completed interviews despite efforts to engage them.

Sample Analysis: Primary data were collected through a set of structured questionnaires, containing both open and closed-ended questions, which were distributed to selected participants. These questionnaires were administered in designated marketplaces where packaged pure honey was sold, ensuring the relevance and accuracy of the data collected. To aid in the analysis, numerical values were assigned to the responses on factors influencing consumers' awareness of pure honey and its benefits, the impact of product attributes (such as quality and packaging) on willingness to pay (WTP), and the influence of market dynamics (including price and availability) on WTP. Respondents were asked to rate their level of agreement using a five-point Likert scale, ranging from 1 (strongly disagree) to 5

(strongly agree), with the weighted values corresponding to the average ratings of the respondents.

Data Analysis: The data collected were subjected to descriptive statistics, including frequency counts, percentages, and mean values which were computed to provide a comprehensive understanding of the gathered information.

RESULTS AND DISCUSSIONS

This study examines the factors influencing consumers' willingness to pay (WTP) for pure honey in Ibadan, Oyo State, Nigeria, focusing on socio-economic characteristics, awareness, product attributes, and market dynamics. The results are presented and interpreted in relation to the study's objectives and research questions, with implications discussed for forest economics and forest product marketing. Table 1 reveals a predominantly male consumer base (60%). Most consumers fall within the 31–50 age group (50%), with tertiary education attainment (50%) and monthly incomes between ₦50,000 and ₦100,000 (45%). This demographic suggests that higher education and moderate income levels positively influence honey consumption, aligning with studies indicating that educated consumers are more health-conscious and inclined toward premium natural products (Pappalardo *et al.*, 2020).

Table 1: Socio-Economic Characteristics of Pure Honey Consumers

Characteristics of honey consumers	Description
Sex	Majority are Male (60%)
Age (Years)	Majority are 31–50 Years (50%)
Educational status	Majority have Tertiary Education (50%)
Consumers monthly income (Naira)	Majority earn 50,000–100,000 Naira (45%)

Factors Influencing Awareness of Pure Honey and Its Benefits: As shown in Table 2, awareness of pure honey's health benefits ranked highest (4.5), followed by media advertisements (3.8) and word-of-mouth (3.6). Certification and labeling, with a lower mean score of 2.8, ranked last, highlighting a significant gap in consumer trust and knowledge of product authenticity. These results indicate that while consumers value the health benefits of honey, limited certification undermines their confidence in product quality. This finding supports prior research that emphasizes the role of credible labeling in fostering consumer trust (Ngo *et al.*, 2020). Enhanced certification standards and public health education campaigns could bridge this gap, ensuring that

consumers recognize and value pure honey over adulterated alternatives.

Table 2: Factors Influencing Consumers' Awareness of Pure Honey and Its Benefits

Awareness Factor	Mean Score	Rank
Health benefits (antioxidant, antibacterial properties)	4.5	1
Media advertisements	3.8	2
Word-of-mouth	3.6	3
Educational campaigns	3.0	4
Certification/labeling of products	2.8	5

Impact of Product Attributes on WTP for Pure Honey: The findings in Table 3 show that purity (4.7) is the most critical attribute influencing WTP, followed by taste (4.5) and packaging design (4.0). Certification (3.9) and availability in preferred sizes (3.7) are also notable factors. These results align with the literature, which identifies purity and sensory attributes as key determinants of consumer preferences (Bukhari *et al.*, 2021). Interestingly, while certification ranked lower in awareness (Table 2), it moderately impacts WTP, suggesting that consumers may associate certification with higher product costs without understanding its assurance of quality. This gap necessitates producer-seller collaborations to invest in attractive packaging and certification schemes, particularly in competitive urban markets like Ibadan.

Table 3: Impact of Product Attributes on Willingness to Pay for Pure Honey

Attribute	Mean Score	Rank
Purity	4.7	1
Taste	4.5	2
Packaging design	4.0	3
Certification	3.9	4
Availability in preferred sizes	3.7	5

As shown in Table 4, price (4.5) and availability in markets (4.2) were the most influential market factors. Access to organic stores (3.8) and consumer trust in sellers (3.6) also played significant roles. However, proximity to purchase points (3.2) was less critical, suggesting that urban consumers prioritize quality over convenience.

Table 4: Role of Market Dynamics in Shaping Willingness to Pay for Pure Honey

Market Factor	Mean Score	Rank
Price	4.5	1
Availability in markets	4.2	2
Access to organic stores	3.8	3
Consumer trust in the seller	3.6	4
Proximity to purchase points	3.2	5

This finding corroborates existing literature that urban honey consumers are price-sensitive but willing to pay a

premium for trusted, accessible products (Kallas *et al.*, 2021). It highlights the potential for value-chain actors to expand distribution networks and build consumer trust through transparency initiatives.

Implications for Theory, Practice, and Policy: These findings enrich forest economics by highlighting consumer behavior dynamics specific to honey markets, emphasizing socio-economic and product-related drivers of WTP. Future research could explore similar dynamics in other forest-derived products, enhancing theoretical models of sustainable marketing. For marketers and producers, the results stress the importance of maintaining product purity, improving packaging design, and expanding certification schemes. Targeted marketing campaigns that emphasize health benefits and leverage media platforms could attract broader demographics, especially older consumers. Policymakers should enforce stricter standards for honey quality certification and labeling to combat adulteration and build consumer trust. Investments in awareness campaigns and subsidies for small-scale producers could further enhance market transparency and accessibility. While proximity to purchase points ranked lowest among market dynamics (3.2), existing literature suggests convenience is a significant factor in consumer behavior. This contradiction may stem from the urban setting of Ibadan, where consumers have broader access to honey through diverse channels, diminishing the importance of proximity. Alternatively, it could indicate an emerging trend where quality outweighs convenience for niche health-focused products like pure honey. To address this, future studies could explore whether similar trends exist in rural areas or among different socio-economic groups. Additionally, interventions aimed at expanding distribution networks without compromising quality could balance consumer expectations across diverse markets.

Conclusions: This study contributes to the understanding of consumer behaviour towards pure honey in Ibadan by identifying key factors influencing willingness to pay. It highlights the importance of socio-economic characteristics, product attributes, and market dynamics in shaping consumer preferences. The findings provide insights into the role of education, income, and product purity in driving demand for natural products. Additionally, the study underscores the need for improved certification standards and targeted marketing strategies. These contributions offer valuable implications for forest economics and the marketing of forest-derived products in urban markets.

Declaration of Conflict of Interest: The authors declare no conflict of interest.

Data Availability: Data are available upon request from the first author or corresponding author or any of the other authors.

REFERENCES

- Adenuga, BM; Montowska, M (2023). The Nigerian meat industry: An overview of products' market, fraud situations, and potential ways out. *Acta Sci. Pol. Technol. Aliment.* 22(3): 305-329.
- Bukhari, SFH; Woodside, FM; Hassan, R; Ali, OMSH; Hussain, S; Waqas, R (2021). Intrinsic and extrinsic attributes that drive Muslim consumer purchase behavior: A study in the context of Western imported food. *J. Islam. Mark.* 12(1): 70-94.
- Kabakcı, D; Çankaya, S; Akdeniz, G; Derebaşı, E (2020). Effects of honey sales performed via television commercials on consumers' buying behavior. *Turk. J. Agric.-Food Sci. Technol.* 8(11): 2330-2333.
- Kallas, Z; Alba, MF; Casellas, K; Berges, M; Degreef, G; Gil, JM (2021). The development of short food supply chain for locally produced honey: Understanding consumers' opinions and willingness to pay in Argentina. *Brit. Food J.* 123(5): 1664-1680.
- Majtan, J; Bucekova, M; Kafantaris, I; Szweda, P; Hammer, K; Mossialos, D (2021). Honey antibacterial activity: A neglected aspect of honey quality assurance as functional food. *Trends Food Sci. Technol.* 118: 870-886.
- Ngo, HM; Liu, R; Moritaka, M; Fukuda, S (2020). Effects of industry-level factors, brand credibility and brand reputation on brand trust in safe food: Evidence from the safe vegetable sector in Vietnam. *Brit. Food J.* 122(9): 2993-3007.
- Pappalardo, G; Di Vita, G; Zanchini, R; La Via, G; D'Amico, M (2020). Do consumers care about antioxidants in wine? The role of naturally resveratrol-enhanced wines in potential health-conscious drinkers' preferences. *Brit. Food J.* 122(8): 2689-2705.
- Sparacino, A; Merlino, VM; Blanc, S; Borra, D; Massaglia, S (2022). A choice experiment model for honey attributes: Italian consumer preferences and socio-demographic profiles. *Nutrients* 14(22): 4797.
- Zanchini, R; Blanc, S; Pippinato, L; Di Vita, G; Brun, F (2022). Consumers' attitude towards honey consumption for its health benefits: First insights from an econometric approach. *Brit. Food J.* 124(12): 4372-4386.