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A STUDY OF EXPLORING THE INFLUENCE OF DEMOGRAPHIC FACTORS ON AR-ENABLED SHOPPING EXPERIENCES IN KALYANA- KARNATAKA

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ABSTRACT
This study explores how demographic factors influence consumer attitudes toward augmented reality (AR) in online shopping. As AR reshapes e-commerce, understanding responses across segments is key to effective marketing. Focusing on age, gender, income, education, occupation, and residence, the research examines their impact on interest, engagement, satisfaction, and acceptance of AR platforms. Using a descriptive design and structured questionnaires, findings show that younger, educated, and urban consumers are more receptive to AR, while older and lower-income groups tend to be more skeptical or unaware. The study offers valuable insights for businesses to tailor AR experiences to diverse consumer needs, promoting greater satisfaction and adoption.

Keywords: *Augmented Reality, Consumer Attitudes, Demographic Variables, Online Shopping, AR Adoption, E-Commerce, Consumer Segmentation*

INTRODUCTION

Augmented Reality (AR) is transforming online shopping by blending digital elements with real-world experiences, enabling consumers to make more informed and engaging purchase decisions. As AR becomes more common in e-commerce, understanding how different consumer segments respond to it is essential. Demographic factors—such as age, gender, income, education, occupation, and place of residence—significantly influence perceptions and adoption of AR. Younger, tech-savvy users and urban consumers with better digital access tend to be more receptive, while older or rural users may face usability challenges. This study examines how demographic profiles shape attitudes toward AR in online shopping, aiming to uncover key trends and offer strategic insights for businesses to enhance personalization, improve user satisfaction, and drive broader AR adoption.

REVIEW OF LITERATURE

Research highlights several demographic factors influencing consumer attitudes toward augmented reality (AR) in online shopping. Urban and metropolitan residents are more receptive to AR campaigns due to better internet infrastructure and exposure (Pantano et al., 2020). Higher-income consumers are also more likely to adopt AR, as they have access to advanced devices and seek premium digital experiences (Scholz & Duffy, 2018). Gender differences play a role, with men often drawn to the novelty of technology, while women prioritize utility and ease of use (Hilken et al., 2017). Age is another key factor, as younger consumers, being more digitally native, show greater interest and engagement in immersive AR experiences (Poushneh & Vasquez-Parraga, 2017). Additionally, individuals in white-collar or tech-oriented occupations tend to have more favorable attitudes toward AR shopping features (Yim et al., 2017).

STATEMENT OF THE PROBLEM

Augmented Reality (AR) is transforming shopping experiences, but its adoption varies across demographic groups, especially in regions like Kalyana Karnataka. Limited research exists on how local demographic factors influence consumer attitudes toward AR. This study aims to fill that gap by analyzing how variables such as age, gender,

income, and location shape responses to AR shopping in Kalyana Karnataka, offering insights to guide inclusive and targeted marketing and technology strategies.

OBJECTIVE OF THE STUDY

This study examines how demographic factors—age, gender, income, education, occupation, and residence- influence consumer attitudes toward AR-based shopping. It aims to identify patterns in acceptance, interest, satisfaction, and engagement with AR technologies across different consumer segments.

This study is based on primary data and secondary data sources:

SOURCES OF DATA: This study is based on purely primary data:

Primary Data: Primary data is collected directly from the respondents through a structured questionnaire designed to capture information related to: Demographic variables (such as age, gender, income, education, occupation, location)Awareness and usage of Augmented Reality (AR) in shopping Consumer attitudes, preferences, and satisfaction related to AR shopping experiences

Data Collection Method: Survey method using both online (Google Forms) and offline (paper-based) questionnaires Sample size: 212 respondents from various districts of Kalyana Karnataka region (e.g., Kalaburagi, Bidar, Yadgir, Ballari, Koppal, Raichur, Vijayanagara)

Sampling Technique: Convenience sampling and Purposive sampling were used to ensure inclusion of AR-aware users and demographic diversity.

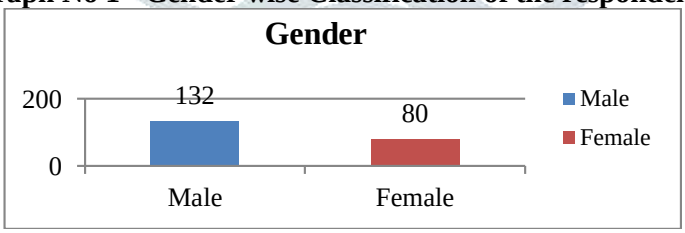
FACTOR ANALYSIS

Table No.1 – Gender wise Classification of the respondents

Gender	Number of Respondents
Male	132
Female	80
Total	**212**

Source: Survey through Questionnaire

Graph No 1 - Gender wise Classification of the respondents



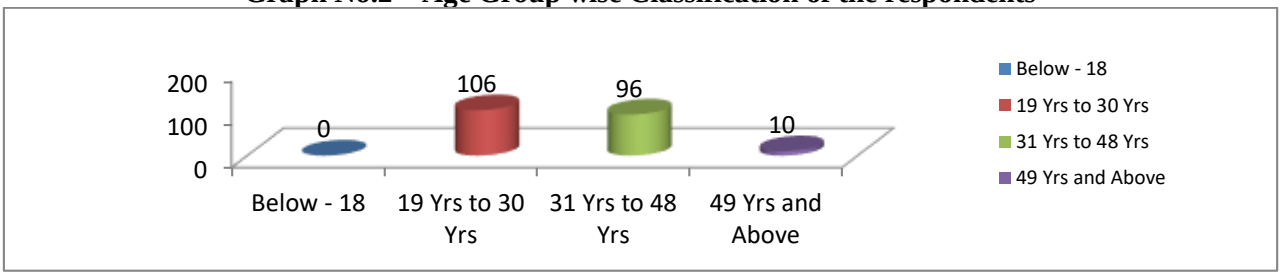
The above table No-1 reveals the details of Gender wise Classification of the respondents. The data obtained from the respondents Out of the total 212 respondents, 62.26% were male, and 37.74% were female. This indicates a male-dominant sample, which may reflect higher interest or exposure among males in the study area.

Table No.2 – Age Group wise Classification of the respondents

Age Group	Number of Respondents
Below - 18	0
19 Yrs to 30 Yrs	106
31 Yrs to 48 Yrs	96
49 Yrs and Above	10
Total	**212**

Source: Survey through Questionnaire

Graph No.2 – Age Group wise Classification of the respondents



The above table No-2 reveals the details of half of the respondents (50%) are aged 19–30 years, representing the young adult segment, which is typically tech-savvy, open to adopting Augmented Reality (AR) in online shopping, and active on digital platforms. 45.3% are in the 31–48 years group, a mature consumer base that is likely financially

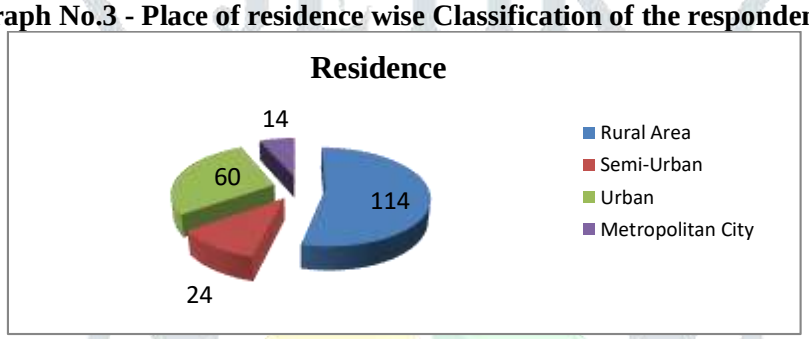
stable and engages in planned online purchases. Their adoption of AR may depend on usability and value. Only 4.7% are 49 years and above, showing low senior representation, which may reflect limited interest or familiarity with AR and online shopping. No respondents are below 18 years, which aligns with ethical research norms and purchasing ability, as minors are less likely to shop online independently.

Table No.3 – Place of residence wise Classification of the respondents

Place of Residence	Number of Respondents
Rural Area	114
Semi-Urban	24
Urban	60
Metropolitan City	14
Total	**212**

Source: Survey through Questionnaire

Graph No.3 - Place of residence wise Classification of the respondents



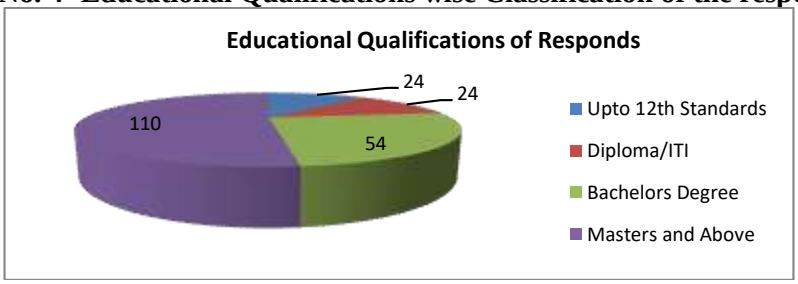
Above table No-3 reveals the details of a majority of the respondents (53.8%) are from rural areas, indicating that rural consumers are significantly represented in the study. Urban residents make up 28.3% of the total, showing a strong presence of consumers from developing towns. Only 11.3% are from semi-urban areas, possibly reflecting a lower concentration or participation from these regions. Metropolitan city respondents account for just 6.6%, suggesting limited input from those in major cities,

Table No. 4 – Educational Qualifications wise Classification of the respondents

Educational Qualifications	Number of Respondents
Up to 12th Standards	24
Diploma/ITI	24
Bachelors Degree	54
Masters and Above	110
Total	**212**

Source: Survey through Questionnaire

Graph No. 4- Educational Qualifications wise Classification of the respondents



Above table No-4 reveals the details of more than half of the respondents (51.9%) hold a Master's degree or higher, indicating a highly educated sample population. 25.5% of respondents have a Bachelor's degree, making it the second-largest group. Both up to 12th standard and Diploma/ITI holders each constitute 11.3% of the sample, representing the lower educational tiers.

Table No. 5 – Occupation base Classification of the respondents

Occupation	Number of Respondents
Students	40
Employed	46
Self Employed	46
Homemaker	80
Total	**212**

Source: Survey through Questionnaire

Graph No. 5 – Occupation base Classification of the respondents

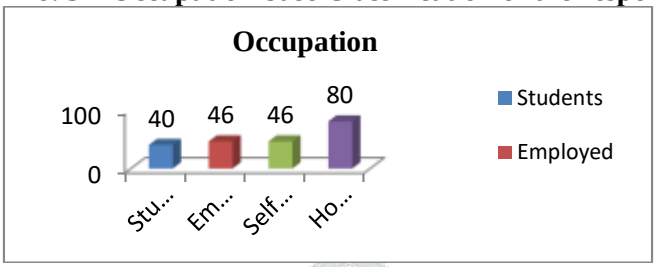


Table 5 shows that Homemakers and Unemployed make up the largest group (37.7%), indicating limited regular exposure to digital commerce. Students account for 18.9%, likely more tech-aware but with lower purchasing power. Employed and self-employed respondents together form 43.4%, representing the economically active group with higher potential for AR adoption in online shopping.

Table No. 6 – Level of family Income base Classification of the respondents

Level Family Income	No of Responds
Less than 2,00,000 INR	110
2,00,001 INR to 5,00,000 INR	52
5,00,001 INR to 10,00,000 INR	28
Above 10,00,000 INR	22
Total	**212**

Source: Survey through Questionnaire

Graph No. 6 – Level of family Income base Classification of the respondents

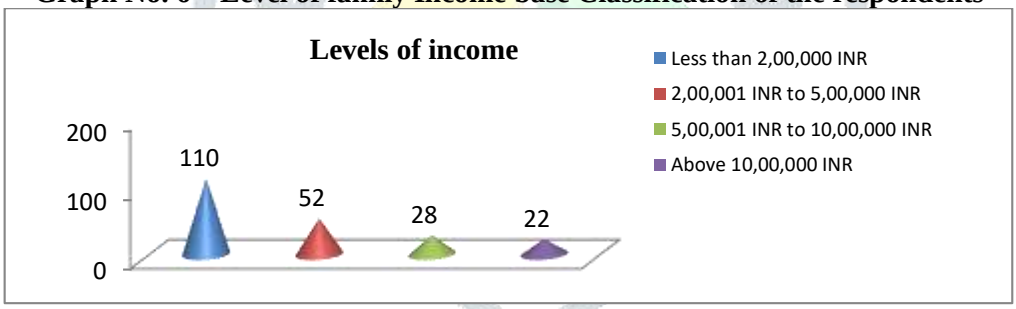


Table 6 shows that 51.9% of respondents earn less than ₹2 lakhs annually, indicating a low-income, cost-sensitive group with limited access to AR. About 24.5% fall in the ₹2–5 lakhs range, showing cautious engagement. The ₹5–10 lakhs group (13.2%) and the high-income group above ₹10 lakhs (10.4%) are more likely to be digitally literate and open to adopting AR in shopping.

Table No. 7 – Often use of online shopping base Classification of the respondents

Online Shopping	Number of Respondents
Rarely	82
Occasionally	84
Weekly	14
Monthly	32
Total	**212**

Source: Survey through Questionnaire

Graph No. 7 – Often use of online shopping base Classification of the respondents

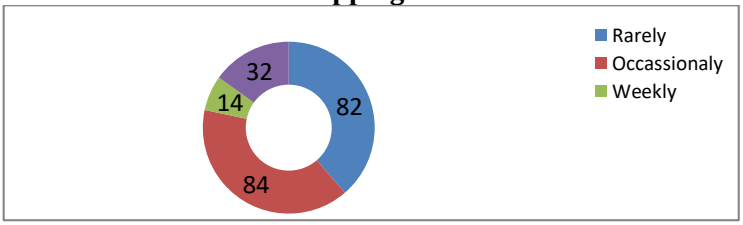


Table 7 shows that 78.3% of respondents are infrequent online shoppers, with 38.7% shopping rarely and 39.6% occasionally, suggesting limited engagement possibly due to trust, access, or interest. Only 15.1% shop monthly and 6.6% weekly, indicating a small group of regular users more open to technologies like AR in e-commerce.

Table No. 8 – Awareness of Augmented Reality

Awareness of Augmented Reality	Number of Respondents
Augmented Reality- Users	48
Augmented Reality- Non-users	164
Total	**212**

Source: Survey through Questionnaire

Graph No. 8 – Awareness of Augmented Reality

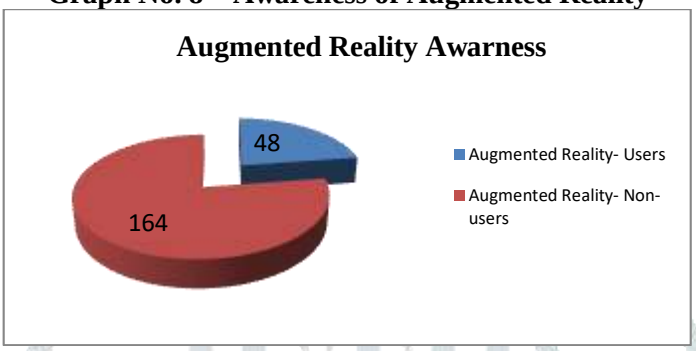


Table 8 shows that only 22.6% of respondents have used AR in online shopping, indicating early-stage adoption. The majority (77.4%) are non-users, likely due to limited awareness, access, or perceived value. This highlights a key opportunity for marketers to promote AR features, especially in regions like Kalyana Karnataka, and calls for further research into barriers such as digital literacy, affordability, and tech readiness.

FINDINGS

Among the 212 respondents, 62.26% were male and 37.74% female, with males showing greater awareness and interest in AR shopping. Younger respondents (18–30) were more curious and open to AR, while older individuals (40+) showed limited familiarity. Higher education levels correlated with better understanding and acceptance of AR tools, and higher-income groups were more aware and likely to use AR for informed purchases. Urban consumers had greater exposure to AR platforms compared to rural respondents, highlighting a digital divide. Overall, 77% had little or no awareness of AR in shopping, indicating that awareness, accessibility, and digital literacy significantly influence consumer attitudes toward AR.

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SUGGESTIONS

To encourage AR adoption in online shopping, awareness should be raised through campaigns using social media, local influencers, and vernacular content. E-commerce platforms must promote AR features with tutorials to ease usage. Younger, educated users should be targeted first to drive broader adoption. AR tools need to be optimized for low-cost devices and slow internet, with regional-language support. Localized AR experiences and partnerships with local retailers can boost relevance in regions like Kalyana Karnataka. Simplifying interfaces and addressing privacy concerns will help build trust, especially among older or less tech-savvy users.

CONCLUSION

The study finds that younger, educated, urban, and higher-income consumers are more aware and receptive to AR shopping, while older, rural, and low-income groups show limited interest due to low awareness and digital access. Males also showed slightly higher AR usage than females. Overall, low awareness highlights a digital literacy and access gap in Kalyana Karnataka, emphasizing the need for targeted awareness, education, and infrastructure development to boost AR adoption across diverse demographics.

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