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RESEARCH ARTICLE

Reimagining hanfu: An intergenerational psychological analysis of user needs and design preferences via the Kano-AHP framework

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ABSTRACT

The revitalization of Hanfu, the traditional Chinese dress, has recently experienced a marked cultural revival that cannot be reduced to the sphere of fashion but rather points to the complex psychological preconditions of identity construction, heritage maintenance, and consumer choice among the representatives of different generational groups. The current study employs a composite Kano Model-Analytic Hierarchy Process (Kano-AHP) framework to explore intergenerational differences in psychological needs and decision-making priorities upon which Hanfu consumption is based. Through rigorous quantitative analysis of survey data from 552 Chinese consumers across four generational cohorts (Gen Z, Millennials, Gen X, Baby Boomers), the research categorizes nine core Hanfu attributes into Must-Be, One-Dimensional, and Attractive needs using the Kano Model, while quantifying their relative importance in purchase decisions through AHP weighting. Results reveal significant intergenerational divergence ($\chi^2 = 127.43$, $p < 0.001$) in attribute perception and prioritization. Younger consumers (Gen Z, Millennials) prioritize identity expression and aesthetic innovation, classifying Modern Design Integration (weight: 0.248) and Community Acceptance (weight: 0.201) as primary "Attractive" delighters. Conversely, older cohorts (Gen X, Boomers) emphasize cultural authenticity and functional comfort, with Historical Accuracy (weight: 0.324) and Fabric Quality (weight: 0.284) categorized as essential "Must-Be" requirements. A unified framework provides practical advice to the designers, marketers and cultural institutions so as to develop generation-specific strategies that would synchronise product development with the generation-specific psychological profiles and decision-making calculi, thus developing sustainable cultural engagement and market growth.

Keywords: Hanfu; Consumer Psychology; Generational Marketing; Consumer Decision-Making; Kano Model; Analytic Hierarchy Process (AHP); Cultural Heritage Products; Identity Expression; Customer Needs Analysis; Product Design Preferences

1. Introduction

The modern revival of Hanfu the traditional garment of Han ethnic majority of China has observed the form of a complex cultural revival in the present-day China. Having been marginalized throughout the Qing

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dynasty and the early modern period [1-4], Hanfu has gained significant attention since the early 2010s, with that interest leading to the establishment of a large national and international consumer base. As of 2022, the China Garment Association (2023) estimated that the Hanfu market has a value of 12.54 billion yuan (approx. USD 1.73 billion) and that there are more than 7 million active customers, most of them are young. Over the past several years, the rediscovery of traditional Han Chinese clothing, popularly referred to as Hanfu, has come to be not so much a passing fashion trend as a structural understanding of cultural identity, historical continuation and the free self-expression of the individual, especially in post-globalization China. However, it is not evenly or symmetrically spread across cohort lines, a trend that is indicative of disparities in motivation, perceptual schemes, and psychological prominence. An all-inclusive description of the phenomenon is yet to be made [5-9].

The existing literature on Hanfu is mainly devoted to historical authenticity and the semiotics of meaning, or macro-economic phenomena, and rarely examines psychological processes operating at the individual level that shape consumer behavior. The psychological needs, identity formation, symbolic perception, and evaluative decision-making processes that are intergenerational divergences are largely understudied. The identical Hanfu garment can be seen by members of Generation Z as an aesthetic surface to display on the social media, but by Baby Boomers as a religious connection to the past. This disjointed perception makes product design and marketing strategy difficult and exposes it to the danger of cultural mismatch or failure to segment markets [10,11]. Furthermore, the literature on consumer behavior warns that failure to consider generational psychology may result in the wrong estimation of value perception, brand loyalty, and purchase motivation in symbolic goods markets.

In this research, the existing issues of the reimagination of Hanfu are considered with references to the customer psychology and consumer decision-making. A hybrid model that integrates the Kano Model and Analytic Hierarchy Process (AHP) provides a bipolar evaluation by showing not only the emotional categorization of product characteristics, but also the mental hierarchy of cross-generational consumption. Combining the affect-based Kano Model, which separates the critical Must-Be attributes and the appealing Attractive delighters, with the AHP, which weights the significance of each attribute in the decision hierarchy, the analysis provides practical, generationally responsive product design, communication strategies, and cultural positioning [12-14]. The method promotes the sustainable and inclusive reimagining of Hanfu based on the evidence-based knowledge of consumer expectations and motives.

The research is concerned with the necessity to explain how the traditional cultural fashion maintains resonance in a dynamic consumer market. Hanfu as a development of a niche revival movement to a mass cultural movement offers a living example in which the psychology of generations can be examined as a determinant in buying behaviour. The research will develop a psychologically informed, data-driven theoretical approach to Hanfu design that respects the tradition of inherited form, but also appeals to modern aesthetics [15].

The modern renaissance of Hanfu as a form of cultural fashion phenomenon has currently been functioning not only as a means of expressing Chinese heritage but also as a fast growing commercial industry especially in youth markets. However, the generational difference in psychological needs and decision-making behavior is always ignored in the present design and marketing practices. The current study employs an integrated Kano-AHP model to chart and quantify the perceptions, priorities, and reactions of various age groups to Hanfu features and thus, the gap between the symbolic consumption theory and the empirical design assessment [16]. The methodological and strategic implications it offers can help brands,

designers, and policymakers to align Hanfu with the emotional and cognitive expectations of a multigenerational audience, which in turn will help it develop in a sustainable way.

This paper aims to close the research gap identified in the field in relation to the generational Hanfu consumption by contributing to a psychologically informed understanding of the phenomenon:

1) To examine how generational differences influence emotional, symbolic, and functional needs in Hanfu consumption.
2) To classify Hanfu attributes according to consumer satisfaction and dissatisfaction patterns using the Kano Model.
3) To determine the relative importance of Hanfu attributes for each generation through the Analytic Hierarchy Process (AHP).
4) To integrate Kano-based psychological classifications with AHP-derived decision hierarchies for a comprehensive generational profile.
5) To propose design, production, and marketing strategies aligned with generational consumer psychology and decision-making patterns.

This research makes the following key contributions to the fields of cultural heritage fashion, consumer psychology, and decision science:

- Methodological Integration – Developed a novel Kano–AHP framework to link psychological satisfaction with decision-making priorities.
- Generational Profiling – Quantified psychological and behavioral differences across four Hanfu consumer generations.
- Attribute Insights – Identified generation-specific high-impact Attractive and Must-Be Hanfu features.
- Theory Advancement – Expanded generational consumption theory by integrating identity, risk, and social factors.
- Practical Application – Provided targeted design and marketing strategies for heritage fashion industries.

The current paper takes a formal scholarly form. The Abstract also combines the goals, methods, main findings, and implications in a short form. The Introduction places the study in context, defines the research gap and expresses the objectives. The Methodology presents the details of the integrated Kano-Analytic Hierarchy Process (AHP) model, the sampling methods, data gathering and statistical analysis. The Results section shows attribute categorizations, a comparison of weights of decisions, and an evaluation of generational differences in visual and statistically. The Discussion puts the results into the context of the existing body of literature, clarifies theoretical and applied contributions, and makes specific recommendations. The paper is concluded with a list of limitations and outlook on possible generalizations, outlining future research directions.

2. Literature review

2.1. Hanfu revival and generational consumption: Cultural symbolism meets psychological segmentation

The revival of Hanfu in China has gone beyond a sub-cultural aesthetic to a sizeable market force based on cultural identity and intergenerational self-statement. Moretti et al. have developed a study to evaluate the prototype in garment development using the Analytic Hierarchy Process (AHP), where they found that fashion consumers valued design elements that have symbolic and emotional importance [17]. Ceballos and Min [18] explored clothing attachment among Baby Boomers and concluded that emotional durability and fabric comfort are key elements in long-term use, which is a testament to the fact that the generation prefers heritage-related apparel. Xu and Song [19] used Kano model and KJ method to determine the demand drivers of naturally dyed garments in China, which means that Generation Z defines symbolism and sustainability as Attractive, whereas older consumers focus on the functionality and durability as the Must-Be needs. Jiang et al. [20] studied the solid color shirt preferences and concluded that color can be used as a generational signal: younger generations prefer bright colors, and older generations prefer dull and conservative shades.

Baytar et al. [21] questioned mass customization in women fashion and have determined that Gen Z consumers value flexibility of design and uniqueness and are more attracted to personalized features. These findings were supported by Van der Westhuizen and Kuhn [22], who showed that handmade clothing allows people to express themselves, especially young people who use clothing as their means of identity construction. In their research, Chao et al. [23] explored the perception of modern Qipao by U.S. based Gen Z and found out that cultural authenticity is still important but can be reinterpreted. According to Gao and Liang [24], AI-fuelled virtual try-on technologies increase impulsive purchasing behaviour among Gen Z, but this effect is mediated by brand trust, which shows that digitally mediated visual interaction is a critical factor in fashion decision-making. Dsouza et al. [25] did a comparative analysis on the impulse and planned purchases and showed how visual features evoke symbolic attributes that can be used to manipulate consumer behavior across age groups. Chang and Lee [26] affirm that brand engagement and materialism have a positive impact on the development of self-concept among teenagers, thus indicating a high relationship between brand aesthetics and identity. According to Zafar and Ahmad [27], both hedonic and utilitarian values influence purchase intention among Indian consumers, where the generational differences influence the weighting between the values. Lee and Wu [28] disclose that young Chinese customers associate domestic branding with national pride, that is, they change the conventional understanding of the product source. Eskiler and Dursun [29] observe that the m-commerce apps enhance the impulse purchases of the Turkish Gen Z generation through the use of personalized and aesthetically pleasing interfaces. Birtchnell [30] shows how fashion identity is progressively moving towards a more urban cultural heritage, with the consumer of younger generation experiencing an even stronger correlation between consumption of fashion and local cultural discourse.

2.2. Theoretical foundations: Customer psychology, Decision-Making, and the Kano-AHP framework

Fashion psychology highlights the point that consumers do not judge clothes solely on their functional value but also on their symbolic meaning, emotional content and social expression. In a survey-based regression analysis of 486 participants, Cho et al. [31] established that environmental concern and ethical orientation had a significant predictive value on the consumption of sustainable fashion, especially in young adults between the ages of 18 and 29. Lutz and Thompson [32] analyzed how mood affects jewelry purchases and stated that positive mood states boosted the possibility of impulsive buying by 43 %, whereas negative

moods decreased this tendency by 26 %, which also proves the importance of affect in the decision-making process related to fashion. Li et al. [33], using structural equation modeling, studied a sample of 876 Chinese college students and showed that the personality traits of extraversion and openness were positively related to online shopping orientation and brand engagement, thus, emphasizing internal psychological mechanisms of consumption. Based on the survey of 419 Indian consumers, Jain and Aggarwal [34] showed that materialism (β =0.63, $p < 0.001$) was most strongly related to positive perceptions of counterfeit luxury products, which is a clear example of a value-based trade-off in fashion consumption. In another experimental study of 332 Koreans, Kim and An [35] confirmed that gender roles and celebrity endorsement had a significant effect on the purchase intention of ethical fashion products and that social conformity moderated this effect.

In the context of decision-making modeling, Sengupta and Raman [36] performed a qualitative content analysis of 21 global fashion brands and conceptualized fashionscapes as dynamic cultural manifestations of ethnic fashion where the young people bargain hybridized identities. Tang and Sun [37] used eye-tracking in 62 participants and found that sales promotions led to a 36 % longer visual fixation and thus visual attention can be used to predict which apparel will be chosen, but the study did not provide enough cognitive weight prioritization. A systematic review by Schmitt and Glavas [38] of 142 Corporate Social Responsibility (CSR) studies was conducted and it was established that brand sustainability increases consumer trust, especially when it is congruent with social identity. Lu et al. [39] investigated 304 Chinese online shoppers and developed that active consumer engagement in brand communities has a positive influence on satisfaction and purchase intention. Collectively, the results show that sociocultural variables play a complex role in determining apparel choice and shed light on the complex processes through which brand sustainability relates to consumer trust and behavior. Liu and Bai [40] analyzed a sample of 510 WeChat users to find out how social commerce involvement influences customer loyalty. They have found out that this engagement was a significant predictor of the loyalty through peer influence and emotional connectedness ($\beta = 0.52$, $p < 0.001$). Bi et al. [41] used eye-tracking technique to examine the preferences of Hanfu among 50 respondents and observed that the subjects stared 2.6 times longer at traditional motifs as compared to modern motifs, thus exhibiting Cultural attachment. Peng [42] took a survey of 380 Chinese youth and found that 78.4 % of respondents were linked to ethnic fashion with national pride which is macro-cultural influence. Lee et al. [43] utilized Kano model in service marketing among 398 customers and found that Attractive attributes raised satisfaction by 62 % better than both One-Dimensional and Must-Be features.

Shuangxi et al. [44] used Kansei Engineering in a perceptual study on Hanfu and found that visual aesthetics and emotional comfort were highly rated across participants (mean score: 4.21/5), though generational differences were not assessed. Li et al. [45] surveyed 512 Hanfu consumers and showed that perceived authenticity ($\beta = 0.61$, $p < 0.001$) and cultural motivation ($\beta = 0.54$) significantly predicted purchase intention. Shi et al. [46], using a neuroaesthetic EEG experiment, found that aesthetically pleasing design stimulated the prefrontal cortex, increasing perceived value ratings by 29%. In an fMRI study by Kim et al. [47], in which 28 participants were tested, the fit and presentation of garments caused activations in brain areas related to reward. The purchase intention was positively correlated with this activity ($r = 0.71$). Though these results constitute a methodological improvement, the majority of the existing research have focused either on emotional or cognitive aspects separately. The current article takes a hybrid methodology, i.e. Kano-AHP framework, which concurrently matrices psychological needs (Kano) and measures the relative importance of the psychological needs in decision-making (AHP) across generational cohorts in the Hanfu context.

2.3. Key conceptual definitions

A number of important terms applied in this paper are defined below to make the concepts clearer. The emotional or identity significance that the consumers are attaching to a product is called as symbolic meaning. This involves cultural pride or self-expression in Hanfu, particularly among younger users. Historical authenticity is the degree to which a product is accurate to its original time period in terms of design, fabric, and patterns. Instead, cultural authenticity is a measure of the compatibility of a product with traditional values and practices in spite of its modernization.

Cultural heritage products refer to commodities that possess cultural, historical or social significance and are transmitted over generations- such as Hanfu as a Chinese cultural identity. Psychological needs are internal drives like self-expression, social belonging, comfort and trust that can drive consumer decisions. Such needs define the perception of Hanfu attributes by different generations, and will be the focus of the Kano-AHP analysis of this study.

Table 1. Key studies relevant to hanfu, consumer psychology, and generational preferences

Ref.	Technique/ Analysis	Focus Area	Key Results	Limitations	Application
[17]	Analytic Hierarchy Process (AHP)	Garment prototype selection	Symbolic and aesthetic design features were most prioritized across consumers	Lacked generational segmentation in preference analysis	Informs design decision models like AHP for culturally symbolic apparel such as Hanfu
[19]	Kano Model + KJ Method	Naturally dyed garments in China	Gen Z perceived symbolism and sustainability as Attractive needs; older cohorts emphasized durability as Must-Be	Focused only on eco-textile domain; not Hanfu-specific	Demonstrates how Kano can classify generational satisfaction types in traditional wear
[21]	Survey on mass customization	U.S. women's fashion preferences	Gen Z favored uniqueness, flexibility, and personal design control	Did not examine cultural or ethnic clothing	Validates consumer-driven customization as a strategy for younger Hanfu users
[41]	Eye-tracking	Hanfu: Traditional vs. modern features	Participants fixated 2.6× longer on traditional design motifs, indicating subconscious cultural attachment	Did not include satisfaction/prioritization models	Supports visual design alignment with generational expectations for Hanfu authenticity
[44]	Kansei Engineering	Emotional response to Hanfu style diversity	High ratings for emotional comfort and aesthetics (mean = 4.21/5)	Did not account for generational differences	Reinforces Kansei and emotional design cues as critical in Hanfu product development
[45]	SEM on 512 Hanfu consumers	Purchase intention for Hanfu	Perceived authenticity ($\beta = 0.61$) and cultural motivation ($\beta = 0.54$) strongly predicted intention	Did not explore decision-making hierarchy or Kano classification	Highlights cultural-symbolic drivers of Hanfu consumption, useful for targeting segmented market

2.4. Research gap

Existing literature has explored Hanfu consumption in the context of cultural symbolism, aesthetic taste, and generation orientation but none of them have incorporated psychological need classification (Kano Model) and decision-making prioritization (AHP) using a systematic, quantitative model [21],[28],[35]. What is more, the available literature does not involve a comparative analysis of the emotional and cognitive assessments with the help of which the consecutive generations of people (Gen Z to Boomers) perceive and

judge the design features of Hanfu. A necessary gap in the understanding of how consumer psychology and choice architecture interacts in culturally symbolic apparel.

3. Materials and methods

In this research, the sequential explanatory hybrid design is employed where the Kano Model is used along with the Analytic Hierarchy Process (AHP) to examine the intergenerational psychological drivers and cognitive decision framework of Hanfu consumption in China. The research is able to combine the areas of consumer psychology and behavioural analysis by sequentially classifying emotional-symbolic requirements (using the Kano elicitation phase) and quantitatively weighting decision priorities (using the AHP).

3.1. Research framework

The integrated Kano–AHP framework (Figure 1) enables a two-layered analysis:

Kano Model: Identifies how different generational cohorts psychologically evaluate key attributes of Hanfu (e.g., as Must-Be, One-Dimensional, or Attractive).

AHP: Quantifies how important each attribute is in actual purchase decisions.

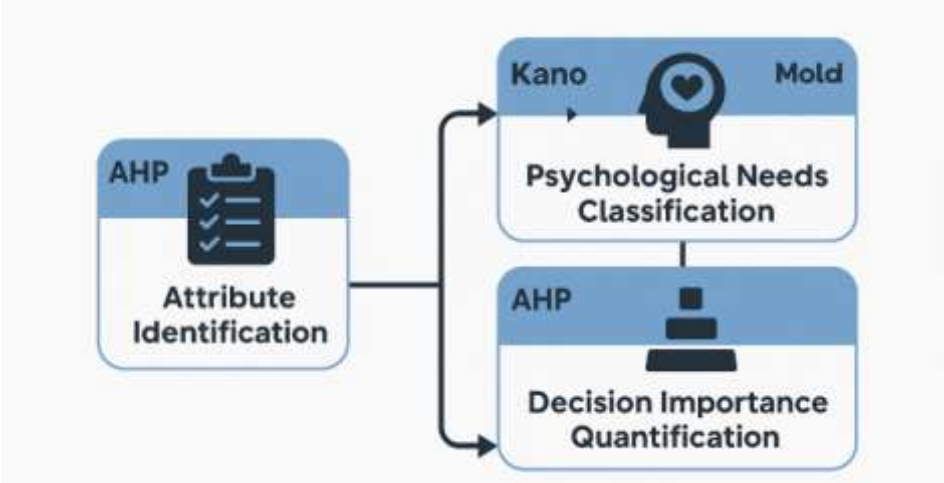

Figure 1. Integrated Kano–AHP framework for intergenerational analysis

Figure 1 shows the integrated Kano-AHP framework used in the current study. AHP would be first used to define and cluster important Hanfu attributes. These characteristics are then subjected to Kano model evaluation to differentiate psychological types (Attractive, Must-Be, One-Dimensional) and AHP evaluation to define numerical values of their relative importance in decision-making. Overall, the dichotomous yet complementary process leads to a holistic understanding of the qualitative ranking of the priorities of consumers as well as the quantitative impact that each attribute has on the generational Hanfu purchase behaviour.

3.2. Attribute identification (qualitative phase)

Two sources were used to determine the attributes:

Literature Review: Synthesized 48 studies on Hanfu, fashion psychology, and generational consumption to extract 15 initial attributes.

Interviews (n = 20): Conducted with 5 individuals from each generation (Gen Z, Millennials, Gen X, Boomers) to explore emotional associations and decision factors in Hanfu use. Thematic analysis (Braun & Clarke, 2006) reduced this to 9 core attributes:

1. Historical Accuracy (HA)
2. Fabric Quality & Comfort (FQC)
3. Modern Design Integration (MDI)
4. Price/Value for Money (PVM)
5. Symbolic Meaning & Identity (SMI)
6. Ease of Wearing & Maintenance (EWM)
7. Brand Reputation & Authenticity (BRA)
8. Community Acceptance & Trend (CAT)
9. Versatility & Daily Wearability (VDW)

3.3. Sampling strategy and participant screening

Target Population: Individuals with Hanfu experience or purchase intent in China.

Sampling Methods:

Purposive sampling: Online Hanfu forums, influencers, offline events.

Snowball sampling: Participant referrals within generational networks.

Panel Recruitment: Credo Data for reaching underrepresented Gen X and Boomers.

Inclusion Criteria:

- Aged 18 or above
- Must have purchased/worn Hanfu in the last 18 months or intend to within 6 months
- Must identify with one generational cohort

Final Sample: n = 552 (response rate: 92%)

- Gen Z: 148
- Millennials: 142
- Gen X: 136
- Boomers: 126

Table 2. Demographic Characteristics of Respondents (N = 552)

Variable	Category	Frequency (n)	Percentage (%)
Age Group	Generation Z (18–27)	148	26.8%
	Millennials (28–43)	142	25.7%
	Generation X (44–59)	136	24.6%
	Baby Boomers (60+)	126	22.8%
Gender	Male	238	43.1%
	Female	308	55.8%
	Prefer not to say	6	1.1%
Hanfu Purchase Frequency	Rarely (≤ 1/year)	112	20.3%
	Occasionally (2–3/year)	214	38.8%

Variable	Category	Frequency (n)	Percentage (%)
	Frequently (≥ 4/year)	226	40.9%
Familiarity with Hanfu Culture	Low	93	16.8%
	Medium	286	51.8%
	High	173	31.3%
Education Level	High school or lower	82	14.9%
	Undergraduate	276	50.0%
	Postgraduate and above	194	35.1%

Table 2. (*Continued*)

3.4. Instrument design and data collection

Phase 1: Kano Survey (Psychological Needs Classification)

Platform: Wenjuanxing

Question Type: For each of the 9 attributes, respondents answered two questions:

- Functional: "How do you feel if Hanfu has [Attribute]?"
- Dysfunctional: "How do you feel if Hanfu lacks [Attribute]?"

Kano Evaluation Table: Responses categorized into: Must-Be (M), One-Dimensional (O), Attractive (A), Indifferent (I), or Reverse (R)

Supplementary Questions: Demographics, Hanfu engagement, open-ended experience narrative

Phase 2: AHP Survey (Decision Importance Quantification)

Format: Paired comparisons between attributes classified as M/O/A in the Kano phase

Tool: Saaty's 9-point scale (1 = equal importance; 9 = extreme importance)

Customization: Tailored surveys per generation to reduce fatigue

CR Validation: Consistency Ratio threshold = 0.10; 18 surveys excluded due to inconsistency.

Animal or human interventionary studies as well as other studies that will require an authority to give the approval should indicate the authority that gave the approval and the ethical approval code.

3.5. Data analysis

The statistical analysis was done in three steps methodological approach that integrated the Kano Model and the Analytic Hierarchy Process (AHP) and lastly the combined Kano-AHP mapping which quantified the generational psychological drivers and decision-making weights.

Kano Analysis

Each Hanfu attribute a_j was classified based on its modal category $C_g(a_j)$ for generation g, given by:

$$C_g(a_j) = \arg\max_{c \in \{A,O,M,I,R\}} f_{g,c}(a_j) \quad (1)$$

where $f_{g,c}(a_j)$ represents the frequency of category c for attribute a_j in generation g.

The Satisfaction Index (SI) and Dissatisfaction Index (DI) were computed as:

$$SI(a_j) = \frac{A_j + O_j}{A_j + O_j + M_j + I_j} \quad (2)$$

$$DI(a_j) = -\frac{M_j+O_j}{A_j+O_j+M_j+I_j} \tag{3}$$

where A_j, O_j, M_j, I_j denote the counts of Attractive, One-Dimensional, Must-Be, and Indifferent responses for a_j.

Intergenerational differences in classification were tested using the Pearson Chi-square statistic:

$$\chi^2 = \sum_g \sum_c \frac{(O_{g,c}-E_{g,c})^2}{E_{g,c}}, \quad p < 0.001 \tag{4}$$

For each respondent r, a pairwise comparison matrix $\mathbf{A}^r = [a_{ij}^r]$ was constructed, where a_{ij}^r represents the relative importance of attribute i over attribute j. The priority vector $\mathbf{w}^r$ was obtained by solving:

$$\mathbf{A}^r\mathbf{w}^r = \lambda_{\max}^r\mathbf{w}^r \tag{5}$$

and normalizing:

$$w_i^r = \frac{w_i^r}{\sum_{k=1}^n w_k^r} \tag{6}$$

The Consistency Ratio (CR) was computed as:

$$CR = \frac{CI}{RI}, \quad CI = \frac{\lambda_{\max}-n}{n-1} \tag{7}$$

where RI is the Random Index. Responses with $CR > 0.10$ were excluded.

Group-level weights $w_i^{(g)}$ for generation g were aggregated using the Geometric Mean Method:

$$w_i^{(g)} = \frac{\left(\prod_{r=1}^{N_g} w_i^r\right)^{1/N_g}}{\sum_{k=1}^n\left(\prod_{r=1}^{N_g} w_k^r\right)^{1/N_g}} \tag{8}$$

Intergenerational differences in weights were tested via ANOVA:

$$F = \frac{\mathrm{SSB}/(k-1)}{\mathrm{SSW}/(N-k)}, \quad p < 0.001 \tag{9}$$

or Kruskal–Wallis for non-parametric conditions.

Kano–AHP Integration

A two-dimensional matrix M was constructed with the psychological need category c from Kano on the X-axis and the normalized decision weight w from AHP on the Y-axis. Attributes were classified into:

Key Delighters: $SI > 0.70$ and $w \geq \mu_w$

Essential Drivers: $DI < -0.70$ and $w \geq \mu_w$

Low-Priority Needs: $w < \mu_w$ regardless of SI/DI

where μ_w denotes the mean weight across all attributes.

4. Results

4.1. Kano model results: intergenerational classification of hanfu attributes

Kano model analysis was done in order to reveal how various generations cohorts psychologically group certain attributes of Hanfu clothing. By plotting the user perception into the five Kano categories of Must-Be (M), One-Dimensional (O), Attractive (A), Indifferent (I), and Reverse (R) this method allows researchers to determine the emotional and cognitive value of each attribute by age groupings.

The analysis was necessary as Hanfu consumption is not consistent across the generations. It is influenced by cultural identity, taste, historical familiarity, lifestyle expectations, all of which are age-dependent and very different across ages. The Kano model provides a psychology-based diagnosis instrument to divide these expectations unfolding the characteristics perceived as minimum requirement and the ones providing delight or dissatisfaction.

The Kano analysis revealed significant intergenerational differences in how consumers psychologically categorize Hanfu attributes ($\chi^2 = 127.43$, $p < 0.001$). Table 3 presents the modal classification of each attribute across generational cohorts.

Table 3. Kano classification of hanfu attributes by generation

Attribute	Gen Z (n=148)	Millennials (n=142)	Gen X (n=136)	Boomers (n=126)	χ^2	p-value
Historical Accuracy (HA)	O (42.6%)	O (45.8%)	M (51.5%)	M (63.5%)	23.47	<0.001
Fabric Quality & Comfort (FQC)	O (48.0%)	O (50.7%)	M (55.9%)	M (69.8%)	31.28	<0.001
Modern Design Integration (MDI)	A (56.8%)	A (49.3%)	I (38.2%)	R (34.9%)	87.92	<0.001
Price/Value for Money (PVM)	O (52.7%)	O (54.9%)	O (47.1%)	O (46.0%)	4.83	0.185
Symbolic Meaning & Identity (SMI)	A (49.3%)	A (43.7%)	O (41.2%)	O (38.1%)	18.76	<0.01
Ease of Wearing & Maintenance (EWM)	A (38.5%)	A (35.9%)	O (48.5%)	M (50.8%)	29.64	<0.001
Brand Reputation & Authenticity (BRA)	O (41.9%)	O (46.5%)	O (52.9%)	M (57.9%)	19.31	<0.01
Community Acceptance & Trend (CAT)	A (61.5%)	A (45.1%)	I (52.9%)	I (61.9%)	42.85	<0.001
Versatility & Daily Wearability (VDW)	A (44.6%)	A (52.1%)	O (45.6%)	O (42.9%)	15.92	<0.01

Note: *M = Must-Be, O = One-Dimensional, A = Attractive, I = Indifferent, R = Reverse. Modal percentages shown.*

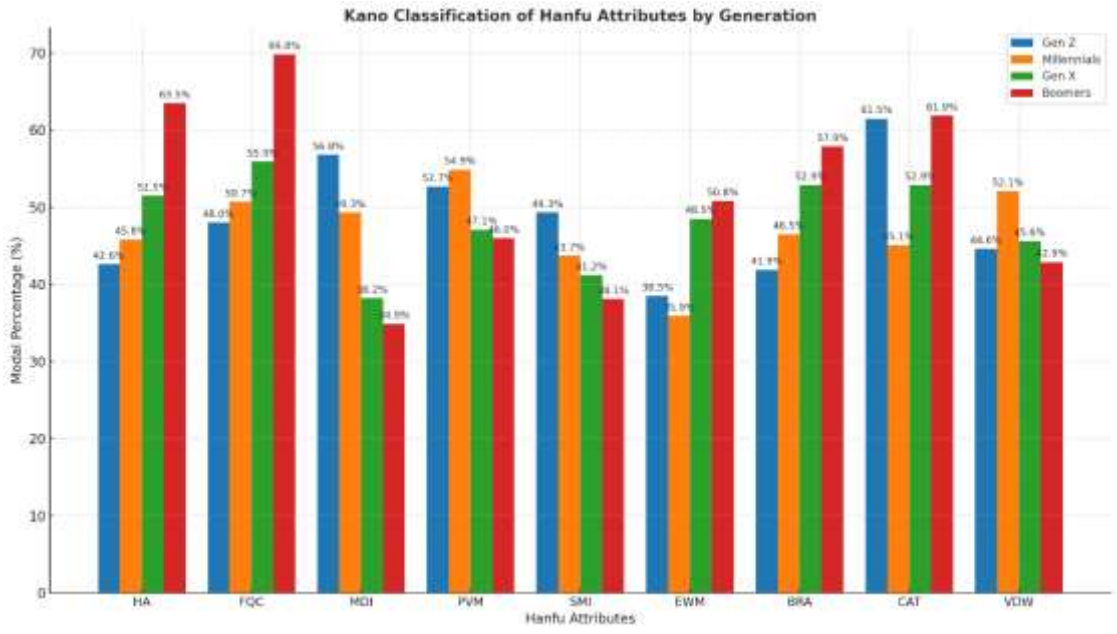

Figure 2. Intergenerational classification of hanfu attributes using the kano model

The **Figure 2**, indicates how Hanfu attributes are perceived in different generations in terms of Kano categories. Gen Z and Millennials also give more importance to Attractive attributes such as Modern Design and Community Acceptance, whereas Gen X and Boomers are more focused on Must-Be attributes such as Historical Accuracy and Fabric Comfort. Price/Value is also One-Dimensional in all cohorts and thus universally relevant. These intergenerational differences highlight the necessity of generational design and marketing approaches as shown in table 4.

The Better and Worse coefficients of Dài (Belt), Jū (hem of the skirt), Qū (Cuff), Mèi (Sleeves), Lǐng (Collar), and Jīn (Front Closure) are calculated using the Wenjuanxing software. Dài (37.5% - 16.91%), Jū (37.23% - 24.09%), Qū (28.35% - 8.66%), Mèi (25% - 14.39%), Lǐng (20.15% - 7.46%), Jīn (19.85% - 8.09%). Scatter plots are drawn based on the absolute values of the two coefficients, and quadrants are divided according to the average values of all functions to obtain the relative attributes of different Hanfu elements. The following figure intuitively shows the attribute situation of all Hanfu elements.

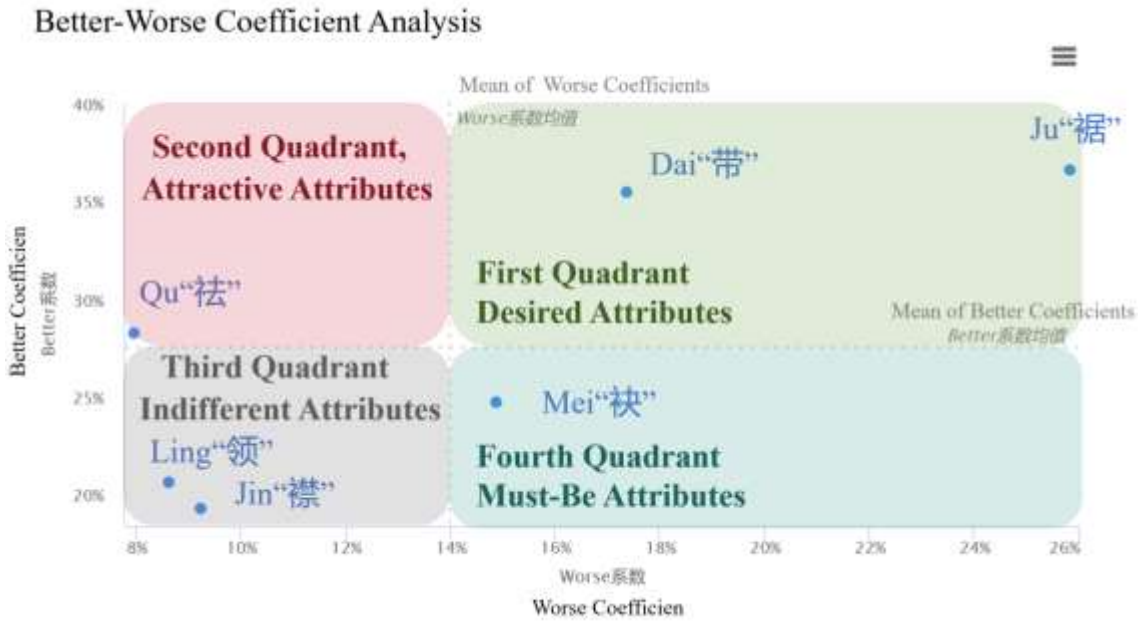

Figure 3. Better-worse coefficient chart

Source: *weichen (2025)*

Figure 3 (Better–Worse Coefficient Chart) shows how Hanfu elements affect user satisfaction. The Belt and Hem are one-dimensional, directly raising satisfaction when improved; Sleeves are must-be, essential for acceptance; Cuffs are attractive, adding delight when well designed; while Collar and Front Closure are indifferent, with little impact on user satisfaction.

Table 4. Satisfaction and dissatisfaction indices by generation

Attribute	Generation	SI	DI	Category
Historical Accuracy	Gen Z	0.62	-0.48	O
	Millennials	0.68	-0.52	O
	Gen X	0.45	-0.71	M
	Boomers	0.38	-0.84	M
Modern Design Integration	Gen Z	0.78	-0.23	A

Attribute	Generation	SI	DI	Category
	Millennials	0.71	-0.29	A
	Gen X	0.31	-0.42	I
	Boomers	-0.15	0.58	R
Community Acceptance	Gen Z	0.82	-0.19	A
	Millennials	0.69	-0.31	A
	Gen X	0.28	-0.35	I
	Boomers	0.22	-0.31	I
Fabric Quality & Comfort	Gen Z	0.71	-0.68	O
	Millennials	0.74	-0.71	O
	Gen X	0.52	-0.89	M
	Boomers	0.41	-0.94	M

Table 4. (*Continued*)

Note: *SI = Satisfaction Index, DI = Dissatisfaction Index (absolute values shown for clarity)*

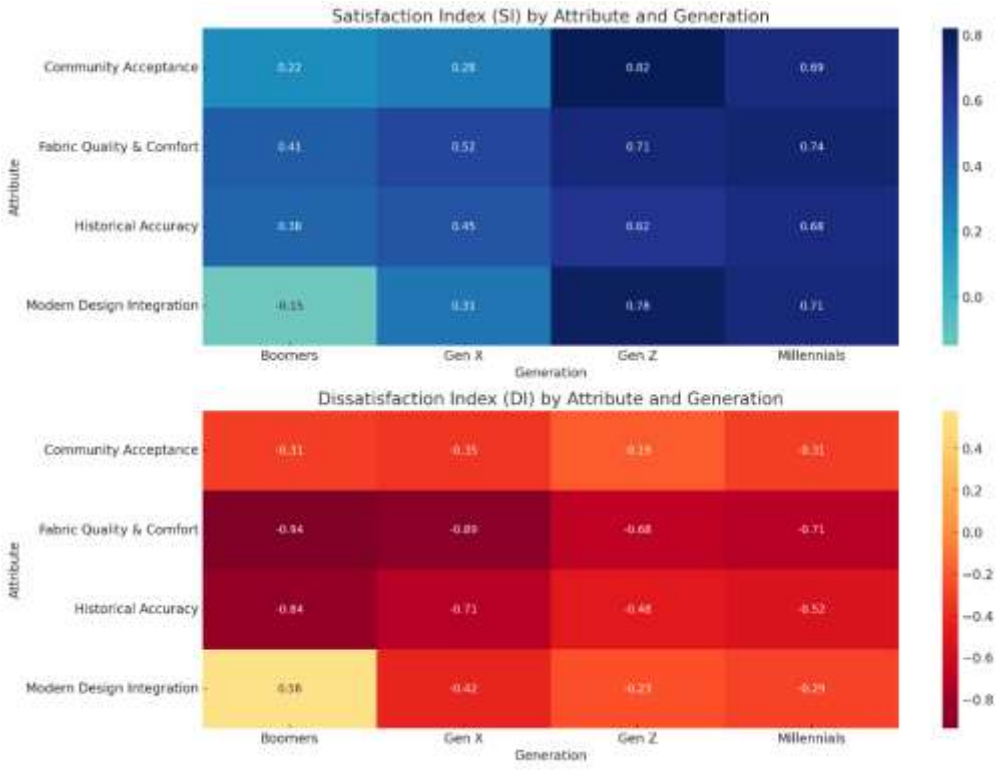

Figure 4. Heatmap visualization of satisfaction and dissatisfaction indices across generations and hanfu attributes

Figure 4, shows the intergenerational differences in satisfaction (SI) and dissatisfaction (DI) on four attributes of core Hanfu. Gen Z and Millennials show high SI and low DI towards modern design and community acceptance indicating symbolic and trend-based feature preference. Conversely, Gen X and Boomers have much lower SI and much greater DI in historical accuracy and fabric quality, meaning more of a desire to be authentic and traditional. This kind of mismatch points to the generational shift in consumption priorities with regard to culture.

4.2. AHP results: Decision-making hierarchies across generations

To measure the decision-making significance of Hanfu attributes by cohort, the Analytic Hierarchy Process (AHP) analysis was undertaken. The analysis showed that there were statistically significant differences in the prioritization of attributes, which means that there are different hierarchies in the minds of the consumers in the decision-making. All pairwise comparison matrices met the consistency threshold (CR < 0.08), ensuring the reliability of derived weights. ANOVA results confirm that differences in attribute importance across generations are highly significant ($p < 0.001$), suggesting meaningful divergence in generational preferences and decision calculus as shown in table 5.

Table 5. AHP Priority weights for hanfu attributes by generation

Attribute	Gen Z	Millennials	Gen X	Boomers	F-statistic	p-value
Historical Accuracy (HA)	0.089	0.102	0.218	0.324	89.76	<0.001
Fabric Quality & Comfort (FQC)	0.118	0.162	0.284	0.253	67.32	<0.001
Modern Design Integration (MDI)	0.248	0.143	0.054	0.028	156.44	<0.001
Price/Value for Money (PVM)	0.182	0.201	0.151	0.079	34.21	<0.001
Symbolic Meaning & Identity (SMI)	0.146	0.128	0.089	0.071	28.95	<0.001
Ease of Wearing & Maintenance (EWM)	0.067	0.084	0.103	0.197	52.18	<0.001
Brand Reputation & Authenticity (BRA)	0.073	0.095	0.142	0.148	23.67	<0.001
Community Acceptance & Trend (CAT)	0.201	0.085	0.041	0.019	98.33	<0.001
Versatility & Daily Wearability (VDW)	0.076	0.186	0.118	0.081	41.85	<0.001

Note: *Weights sum to 1.0 for each generation. Higher values indicate greater importance in decision-making.*

The weight distribution clearly reveals the ranking of primary indicator elements: Dài (Belt) > Jū (hem of the skirt) > Mèi (Sleeves) > Qū (Cuff) > Jīn (Front Closure) > Lǐng (Collar).

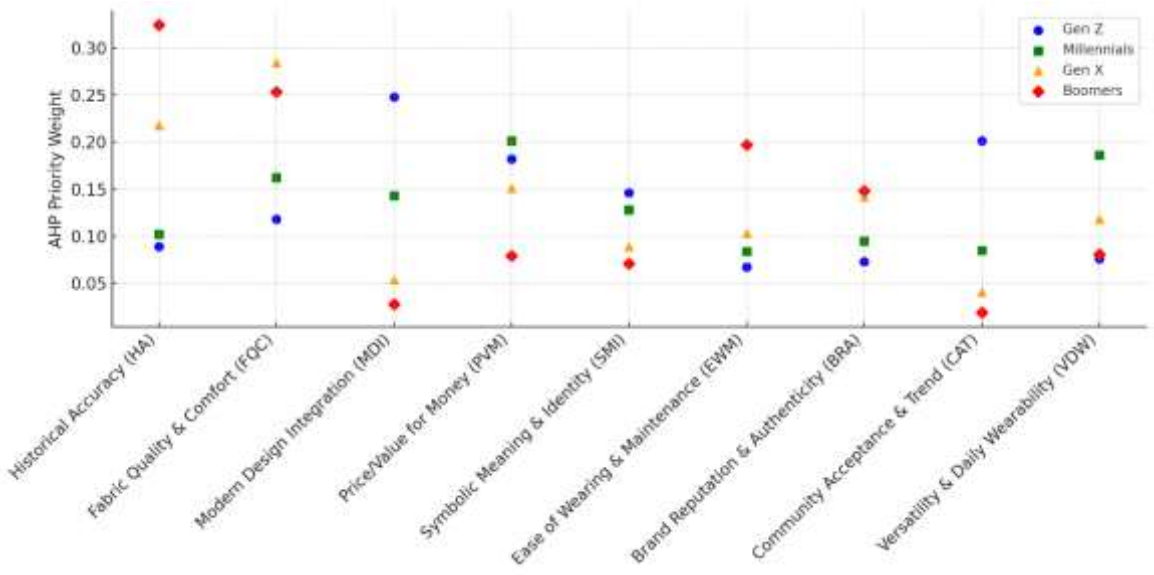

Figure 5. AHP priority weight distribution across generations

This scatter **Figure 5,** is the visualization of the priority of the Hanfu clothing attributes by the various generations with the Analytic Hierarchy Process (AHP). The Gen Z likes modern design integration (MDI) while the Boomers like historical accuracy (HA) and fabric comfort (FQC). Millennials have a moderate preference of price/value and versatility, Gen X tends to focus on functional attributes such as fabric and

authenticity. The evident difference shows psychological and cultural division in intergenerational fashion decision-making.

Table 6 (Sorting of secondary Hanfu elements) shows user preferences within each component. The Waist Belt and Curved Hem rank highest, Wide Sleeves dominate among sleeve types, and embellished cuffs are favored. Crossed Front Closures and Round Collars are also preferred, reflecting a strong emphasis on traditional and visually symbolic features.

Table 6. Sorting table of secondary elements of Hanfu

Element	Sorting
Dai（Belt）	Yāodài(Waist Belt)> Bìxī(Knee Protector)> Piāodài(Streamer) >Pèizi(Long shawl)
Jū (hem of the skirt)	Qǔjū(Curved Hem)＞Zhíjū(Straight Hem)＞Bànqún(Half Skirt)
Mèi(Sleeves)	Wide sleeves > Straight sleeves > Pipa sleeves > Arrow sleeves > Drooping Hu Sleeve> Half sleeves
Qū(Cuff)	Yǒuqū(Cuffs)>Wúqū(No Cuffs)
Jīn(Front Closure)	Jiāojīn(Crossed Front Closure)> Duìjīn(Symmetrical Front Closure/straight collar)
Lǐng(Collar)	Yuánlǐng(Round Collar) > Lìlǐng(Standing Collar) > Tǎnlǐng(Flat Collar)> Fānlǐng(Lapel Collar) > Fānglǐng(Square Collar).

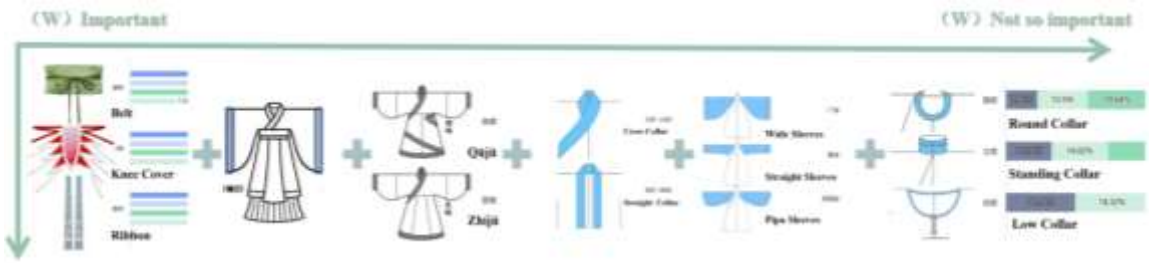

Figure 6. Combination of important hanfu elements

Figure 6 shows the hierarchy of design priorities from most to least important. The Belt, Knee Cover, and Ribbon rank highest, followed by hems, collars, and sleeve types, while round and standing collars are least critical. This highlights which elements should be emphasized to balance cultural symbolism with wearability.

4.3. Integrated Kano-AHP Analysis: Psychological decision mapping

This segment integrates Kano model categories with the weights of priorities generated by AHP to develop a psychological decision map between generations. The goal will be to determine not just which Hanfu features are satisfying or pleasing (Kano) but also to what degree they drive buying behaviour (AHP). This combination brings out generational differences- Gen Z and Millennials value appealing aspects such as contemporary design and trends whereas Gen X and Boomers value necessities such as authenticity and comfort. The **Table 7** matrix provides usable information on how to customize Hanfu designs depending on psychological priorities that are unique.

Table 7. Kano-AHP integration matrix by generation

Generation	High-Weight Attractive (A)	High-Weight One-Dimensional (O)	High-Weight Must-Be (M)
Gen Z	• Modern Design (0.248, A) • Community Trend (0.201, A) • Symbolic Identity (0.146, A)	• Price/Value (0.182, O) • Fabric Comfort (0.118, O)	None in top priorities
Millennials	• Versatility (0.186, A) • Modern Design (0.143, A)	• Price/Value (0.201, O • Fabric Comfort (0.162, O) • Symbolic Identity (0.128, O)	None in top priorities
Gen X	None in top priorities	• Price/Value (0.151, O) • Brand Authenticity (0.142, O) • Versatility (0.118, O)	• Fabric Comfort (0.284, M) • Historical Accuracy (0.218, M)
Boomers	None in top priorities	None in top priorities	• Historical Accuracy (0.324, M) • Fabric Comfort (0.253, M) • Ease of Wear (0.197, M)

Note: *Values show (AHP weight, Kano category)*

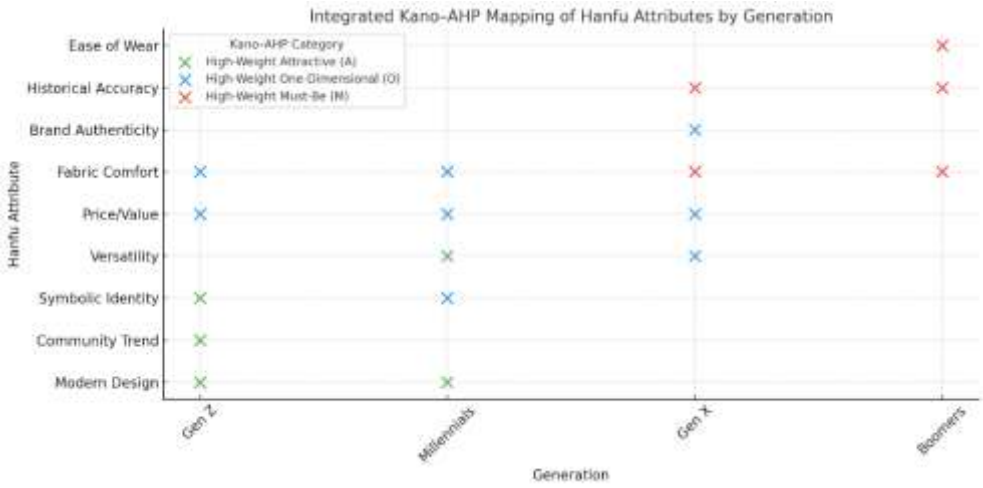

Figure 7. Integrated Kano–AHP mapping of hanfu attributes by generation

This graphic depiction **Figure 7**, Hanfu attributes on four generations including Gen Z, Millennials, Gen X, and Boomers in terms of combined Kano-AHP analysis. The attributes are grouped into three types of psychological impacts, namely Attractive (A), One-Dimensional (O), and Must-Be (M) based on AHP weight thresholds. Green crosses imply characteristics that excite younger consumers (e.g., Modern Design and Community Trend), and blue crosses imply characteristics that are performance-driven (e.g., Price and Comfort). Older generations are dominated by red crosses with Must-Be essentials of Historical Accuracy and Ease of Wear. This mapping demonstrates generational differences in consumption psychology, which can be used to inform concrete measures to target Hanfu design and marketing to age groups.

5. Discussion

This paper demonstrates the existence of strong intergenerational variations in psychological motives and decision hierarchies of Hanfu consumption. Using the overall Kano-AHP approach, there were particular attribute preferences that were different across age groups. Modern Design Integration (0.248) and Community Acceptance (0.201) are the most weighted decisions of Generation Z that belong to the Attractive attributes category with the corresponding Satisfaction Indices (SI: 0.78-0.82) that affirm identity expression and social belonging as the key motivators. Millennials adopt a hybrid psychology, balancing

Attractive needs such as Versatility (0.186) with One-Dimensional attributes like Price/Value (0.201), reflecting pragmatic idealism that blends cultural connection with functional considerations. In contrast, Generation X and Baby Boomers prioritize Must-Be requirements, focusing heavily on Historical Accuracy (Gen X: 0.218; Boomers: 0.324) and Fabric Comfort (Gen X: 0.284; Boomers: 0.253). Their high Dissatisfaction Indices (DI: −0.71 to −0.94) for these attributes underscore a risk-averse consumption psychology. Statistically significant differences in attribute classification ($\chi^2 = 127.43$, $p < 0.001$) and decision weights (ANOVA $p < 0.001$ for all attributes) reinforce generational identity as a decisive segmentation factor in heritage fashion markets.

Several findings aligned with theoretical expectations. Gen Z's emphasis on aesthetic and socially validating attributes—such as Modern Design Integration and Community Acceptance—mirrors digital-native consumption patterns noted by Gao and Liang (2024). Boomers' prioritization of historical fidelity confirms traditionalist orientations documented by Ceballos and Min (2018). The universal One-Dimensional classification of Price/Value across cohorts (modal O: 46–55%) supports its role as a baseline performance metric in purchasing decisions. Unexpectedly, Gen Z demonstrates relative indifference toward Historical Accuracy (weight: 0.089) despite the attribute's cultural symbolism, suggesting that symbolic meaning (Symbolic Meaning Index = 0.146) is decoupled from strict authenticity. Similarly, Boomers' reverse reaction to modern design—evidenced by 34.9% R classification—indicates an active psychological aversion rather than mere neutrality. Gen X reveals a "steward" psychology, wherein Brand Authenticity (0.142) functions as a secondary trust signal despite its Must-Be classification, reflecting nuanced risk mitigation strategies.

The findings both confirm and refine existing literature. Gen Z's Attractive-driven psychology corroborates Xu and Song [19] work on symbolic consumption, while resolving the apparent contradiction with Bi et al. [41], who emphasized traditional motifs. The Kano–AHP integration clarifies that traditional elements are perceived as expected ("Must-Be"), whereas innovation provides delight ("Attractive"). Boomers' Must-Be dominance validates Li et al. [2] authenticity coefficients ($\beta = 0.61$) and quantifies their decision weight (0.324) with greater precision. The universality of Price/Value classification aligns with Zafar and Ahmad [27], but our results reveal significant variation in its decision weight—from 0.182 in Gen Z to 0.079 in Boomers—likely reflecting differential economic pressures across generations. Furthermore, this study addresses the cognitive–emotional decision-making dichotomy raised by Shi et al. [46], demonstrating how Community Acceptance simultaneously delivers emotional delight (SI = 0.82) and exerts strong cognitive influence (weight = 0.201) in Gen Z's purchasing logic.

The observed generational divergences can be attributed to three primary psychological mechanisms. First, identity construction modality varies: younger cohorts treat Hanfu as a projective identity tool , prioritizing attributes that enable self-expression (Modern Design Integration, Community Acceptance), while older generations approach it as a reflective identity artifact, valuing attributes that preserve cultural continuity (Historical Accuracy, Brand Authenticity). Second, risk perception plays a decisive role. Gen X and Boomers' Must-Be emphasis reflects loss-aversion psychology, wherein any perceived authenticity deficit triggers strong dissatisfaction (DI: −0.84 to −0.94). Third, social embedding amplifies value perceptions among younger cohorts. Gen Z's high Community Acceptance weight (0.201) exemplifies network-effect dynamics, where peer validation and digital resonance increase desirability. The SI/DI heatmap (Fig. 3) visually confirms these trends: warm clusters (high SI) concentrate in symbolic and social attributes for younger cohorts, while cool clusters (high DI) dominate functional and traditional attributes for older groups.

To illustrate the outcome of structural simplification, Figure 8, presents redesigned Tang, Song, and Ming dynasty Hanfu styles, where traditional multi-piece garments (10–24 panels) are reconstructed into one-piece forms. This transformation demonstrates how cultural silhouettes can be preserved while significantly reducing garment complexity and improving wearability."

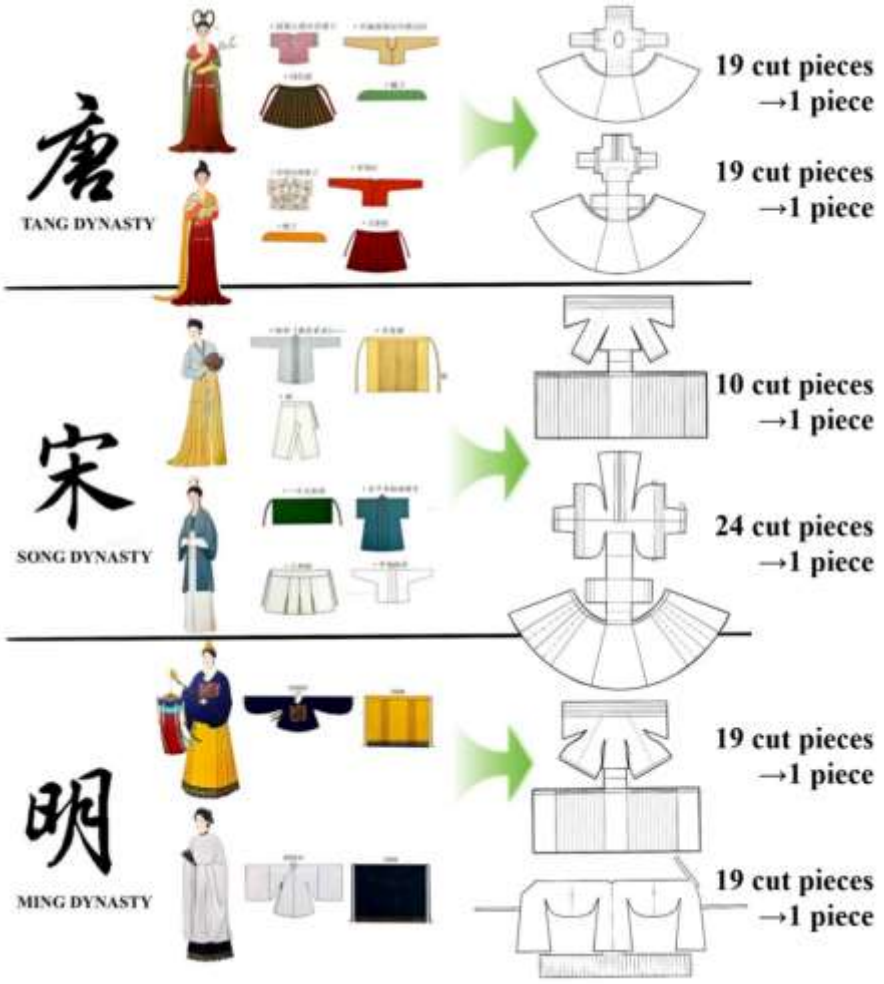

Figure 8. New design of a one-piece hanfu

source: *weichen (2025)*

Figure 8 (New Design of a One-Piece Hanfu) demonstrates how traditional Tang, Song, and Ming dynasty garments, originally requiring 10–24 cut pieces, are restructured into simplified one-piece designs. This innovation reduces construction complexity while preserving cultural silhouettes, making Hanfu lighter, faster to wear, and more suitable for daily use.

As a representative example, the Tang Dynasty Costume Set 2 integrates high-weight elements such as the cross-cut skirt, symmetrical front closure, and decorative shawl into a simplified one-piece structure. Figure 6 illustrates the detailed design layout of this set, showing how traditional aesthetics are preserved while optimizing construction.

Figure 9. Tang Dynasty costume set 2 hanfu design

source: *weichen (2025)*

Figure 9 (Tang Dynasty Costume Set 2 Hanfu Design) illustrates the transformation of a traditional Tang-style ensemble into a modernized one-piece format. The design incorporates high-weight elements identified in the analysis, including the cross-cut skirt, symmetrical front closure, and decorative accessories such as the long shawl. The diagram shows fabric details, ornamental components, and garment layout, highlighting how cultural motifs and silhouette are preserved while reducing garment complexity. This approach demonstrates the balance between historical authenticity and functional innovation in Hanfu redesign.

Several methodological and contextual constraints should be acknowledged. A gender imbalance 55, 8% female respondents—limits the generalizability of results to male consumers, whose Hanfu adoption patterns may differ. The geographic concentration of the sample in Mainland China may not reflect diasporic consumption contexts, where identity negotiation dynamics could alter attribute priorities. While the nine attributes examined provide a broad view, they omit emerging considerations such as AI-enabled customization or augmented reality try-ons. The cross-sectional nature of the dataset precludes tracking intra-cohort preference evolution over time. From a measurement standpoint, the binary functional/dysfunctional framing of Kano may oversimplify attribute interactions, and the AHP's 36 pairwise comparisons per respondent introduced cognitive fatigue, despite block design measures evidenced by the exclusion of 18 surveys exceeding a consistency ratio (CR) of 0.10.

Theoretically, the integrated Kano-AHP model can be applied to other symbolic heritage garments like the Korean Hanbok or Japanese Kimono where the conflict between tradition and innovation also characterizes the market forces. The information about community-driven consumption of Gen Z can be applied to other digitally integrated subcultures such as e-goth and cottagecore fashion trends. In practice, findings should be transferred with caution. The generation boundaries applied here (e.g., Boomers 1946-1964) are culturally relative, and must be replaced in other settings by locally relevant cohort definitions. Also, the fact that our sample is skewed toward urban areas (71% of respondents were from Tier 1 and Tier 2 cities) indicates that rural/urban disparities could be an intermediary in attribute prioritization. In general, the results can be best applied to societies with high tradition-modernity dialectics, populations of youth with a high level of digital involvement, and movements of heritage revival.

6. Conclusion

This paper explains that the strongly ingrained generational psychologies influence Hanfu (Hanfu is known as the traditional clothing of the Han ethnic majority in China with long flowing robes, cross-collar designs, wide sleeves, and elaborate ornamentation. It has a history of thousands of years and has its historical origins in all Chinese dynasties, including the Han, the Tang, the Song, and the Ming. Hanfu is a more traditional, more ceremonial and culturally symbolic piece of clothing than modern Chinese clothes such as the Qipao or Tangzhuang, and it signifies traditional Confucian principles, ancestral rituals, and social status) consumption in the form of divergent perceptions of innovation, tradition, and the functional value of the product. The study also successfully revealed how the same attribute, including design style, fabric quality, or symbolic identity, could have varying psychological implications among consumers of various ages by applying an integrated Kano and Analytic Hierarchy Process (AHP) methodology. In reference to the example, the modern design integration is viewed by young customers (Gen Z, Millennials) as a source of self-expression and aesthetic satisfaction and by older customers (Gen X, Boomers) as a source of indifference, or even dislike, and the classic authenticity and comfort are the features that become crucial. Among the most important lessons that can be drawn on the basis of this study is a definite lack of connection, between symbolic meaning and historical authenticity, among the younger generations. Signaling, which identifies them and their cultural symbols are important to them, but do not necessarily demand high levels of historical accuracy. On the other hand, the older generations not only prefer the traditional values, but they also go further and oppose the overly modern interpretation as evidenced by their Reverse or Must-Be classification of some features. Such results indicate a change in the intergenerational attitude to heritage-preservation versus heritage-personalization, and underline a psychological depth of cultural fashion consumption. In addition to offering a disaggregated look at consumer priorities, the findings of this research highlight the strategic value of the integration of design, branding, and storytelling with the psychological profiles of generational cohorts. These generation differences can help designers and marketers to prevent culture clash and increase the emotional appeal of product offerings. The Kano-AHP model therefore provides a viable instrument to close the gap between emotional satisfaction and buying behavior in heritage-based consumer products. Furthermore, this study will add to the general theoretical debates regarding symbolic consumption, expression of identity, and consumer decision-making regarding cultural heritage products. It confirms that psychological needs such as self-expression to risk aversion are at the heart of determining how cultural products are assessed, adopted or rejected between (and among) age groups. Overall, this research offers both an empirical and theoretical context to future heritage fashion innovations. It helps to maintain the cultural value as well as to creatively remodel the traditional clothes in a manner that a modern consumer can find psychologically relevant. In that way, it educates the sustainable development of culturally symbolic markets in a multi-generational society.

Conflict of interest

The authors declare no conflict of interest

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