

Cultural Innovation in Muslim Fashion: Contemporary Nusantara Motifs in Modest Swimwear Design

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ABSTRACT: This article presents research on the development of Muslim swimwear incorporating contemporary Nusantara motifs, addressing the need for modest yet functional swimwear for Muslim women. Current Muslim swimwear designs available in the market tend to feature plain colours or limited motif variations that primarily represent manufacturer branding rather than cultural elements. This research aims to develop innovative Muslim swimwear designs by applying digitally-developed contemporary Nusantara motifs previously created in earlier research phases. Using quantitative methods with a descriptive approach, the research evaluates design preferences among Muslim women and men aged 20-30 years through expert panel interviews and consumer acceptance surveys. The research contributes to the growing modest fashion industry by bridging traditional Indonesian cultural elements with contemporary design needs, creating swimwear that is aesthetically pleasing, comfortable, and aligned with Islamic principles while celebrating Indonesia's rich cultural heritage.

KEYWORDS: Muslim Swimwear; Contemporary Nusantara Motifs; Digital Textile Design; Modest Fashion; Muslim Fashion Innovation

1. INTRODUCTION

The global modest fashion industry has witnessed rapid growth over the past decade, driven by increasing demand from Muslim consumers seeking apparel that aligns with their values while remaining contemporary and stylish. One of the emerging niches within this sector is Muslim swimwear—often referred to as burkini or modest swimwear—which offers a functional and culturally sensitive alternative that enables Muslim women to participate in water-based activities without compromising their religious principles (Hasan et.al., 2019). Despite this progress, the design of modest swimwear remains relatively homogeneous, with limited exploration into culturally rooted aesthetics, especially in contexts rich with indigenous visual traditions.

Indonesia, home to the world's largest Muslim population, possesses a diverse and vibrant cultural tapestry. Its traditional textile motifs—known collectively as Nusantara motifs—embody centuries of craftsmanship, spiritual symbolism, and regional identity, varying across the nation's thousands of islands (Larista et al., 2024). While these motifs have been preserved and celebrated in traditional garments such as *batik* and *songket*, their integration into functional, contemporary apparel like swimwear is minimal. This underrepresentation presents a compelling opportunity for cultural innovation in fashion design (Candra & Saptatiningsih, 2023).

This research aims to explore how contemporary interpretations of traditional Nusantara motifs can be integrated into the design of Muslim swimwear to foster a stronger sense of cultural identity and representation. Building on prior studies that employed digital tools to reinterpret these motifs (Hasan et.al., 2019), this study investigates their practical application in garment design, particularly focusing on aesthetic appeal, cultural resonance, and functional performance.

The objectives of this research are threefold: (1) to identify key traditional Nusantara motifs suitable for adaptation in swimwear design, (2) to explore the aesthetic and symbolic implications of these motifs in a modern modest fashion context, and (3) to prototype swimwear designs that merge modesty, functionality, and cultural storytelling. By doing so, this study contributes to the expanding discourse on cultural sustainability in fashion, and offers design innovations that empower Muslim women through garments that reflect both faith and heritage. Ultimately, this work not only addresses the aesthetic gap in modest swimwear but also offers a new design framework that encourages the meaningful inclusion of indigenous cultural elements in global fashion products.

2. LITERATURE REVIEW

2.1. Muslim Swimwear and Modest Fashion

Alavi and Khosravi (2020) highlight that Muslim swimwear design must balance functionality, comfort, and adherence to Islamic principles of modesty. Their research emphasizes that successful modest swimwear designs consider fabric properties,

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coverage requirements, and mobility needs while maintaining aesthetic appeal. The authors note that plain designs currently dominate the market, with limited exploration of motif applications.

Rahmawati and Hidayat (2019) examined consumer acceptance of Muslim fashion designs in Indonesia, finding that young adult consumers (aged 20-30) show greater receptiveness to innovative designs that blend traditional elements with contemporary aesthetics. Their research suggests that these demographic values cultural representation in their clothing choices while prioritizing modern style and functionality.

2.2. Nusantara Motifs in Contemporary Design

Kusuma (2018) documents the historical significance of Nusantara textiles and their evolution in modern design contexts. The author emphasizes that traditional motifs carry cultural narratives that can be preserved through thoughtful contemporary applications. Prasetyo and Sari (2020) explored the adaptation of traditional Nusantara motifs into contemporary designs, demonstrating that digital techniques can successfully transform traditional patterns while maintaining their cultural essence. Their research provides a foundation for applying these digitally-transformed motifs to functional garments like swimwear. Rahman and Sari (2019) examined how Indonesian designers navigate cultural identity in contemporary fashion, finding that successful designs balance authentic cultural representation with global design trends. They argue that this approach creates products with both local significance and international appeal.

2.3. Digital Textile Design

Smith and Jones (2021) discuss how digital textile printing has revolutionized fashion design by enabling more complex and customized patterns. Their research highlights the technical considerations for applying digital designs to functional garments, including colour fastness, fabric compatibility, and durability—all crucial factors for swimwear applications. Yuliana (2022) specifically addresses the digitalization of traditional motifs in the textile industry, providing technical insights into preserving the integrity of cultural designs when translated to digital formats and modern garments.

3. RESEARCH METHODOLOGY

3.1. Research Design

This research adopts a quantitative approach with descriptive analysis to systematically examine the application of contemporary Nusantara motifs in Muslim swimwear designs. The goal is to assess how these motifs can be integrated into functional apparel while maintaining cultural integrity and aesthetic value. The methodology is structured into several interrelated stages, each contributing to the overall research objectives:

- **Literature Review and Theoretical Foundation**

The study begins with a comprehensive review of existing literature related to modest fashion, cultural representation in clothing, and the evolution of Nusantara motifs. Sources include academic journals, industry reports, and cultural archives. This review serves to establish the theoretical grounding for the design process, focusing on cultural semiotics, Islamic fashion ethics, and digital design methodologies (Hecker, 2018)

- **Motif Selection and Digital Reinterpretation**

Traditional Nusantara motifs were identified through ethnographic documentation and curated based on regional diversity, symbolic depth, and visual adaptability. These motifs were then digitized and modified using design software such as Adobe Illustrator and CorelDRAW, with careful attention to maintaining symbolic coherence while enhancing visual clarity for textile printing on swimwear fabrics.

- **Design and Prototyping of Swimwear Garments**

Digitally reinterpreted motifs were applied to swimwear design prototypes. The process involved technical drawing, 3D garment simulation (e.g., using CLO 3D), and virtual fitting to ensure functionality, modesty, and aesthetic harmony. Swimwear prototypes were developed to comply with modest dress guidelines, considering factors such as body coverage, fabric opacity, comfort, and hydrodynamics.

- **Survey Instrument Development**

A structured questionnaire was developed to assess user perception regarding the visual appeal, cultural value, and functional suitability of the motif-applied swimwear. The questionnaire used a Likert scale (1–5) to quantify respondent feedback and included both closed-ended and open-ended questions for nuanced insight.

- **Sampling and Data Collection**

The survey was distributed to a purposive sample of 100 female Muslim respondents aged 18–45 who regularly engage in water-related activities and wear modest swimwear. Participants were selected from urban centres in Indonesia to reflect diverse fashion sensibilities and cultural awareness.

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- Data Analysis

Descriptive statistical analysis was conducted using SPSS to interpret the collected data. Key variables included motif recognition, aesthetic satisfaction, perceived cultural identity, and functional usability. Cross-tabulation and correlation analyses were also performed to identify significant patterns across age groups, regional backgrounds, and frequency of swimwear use.

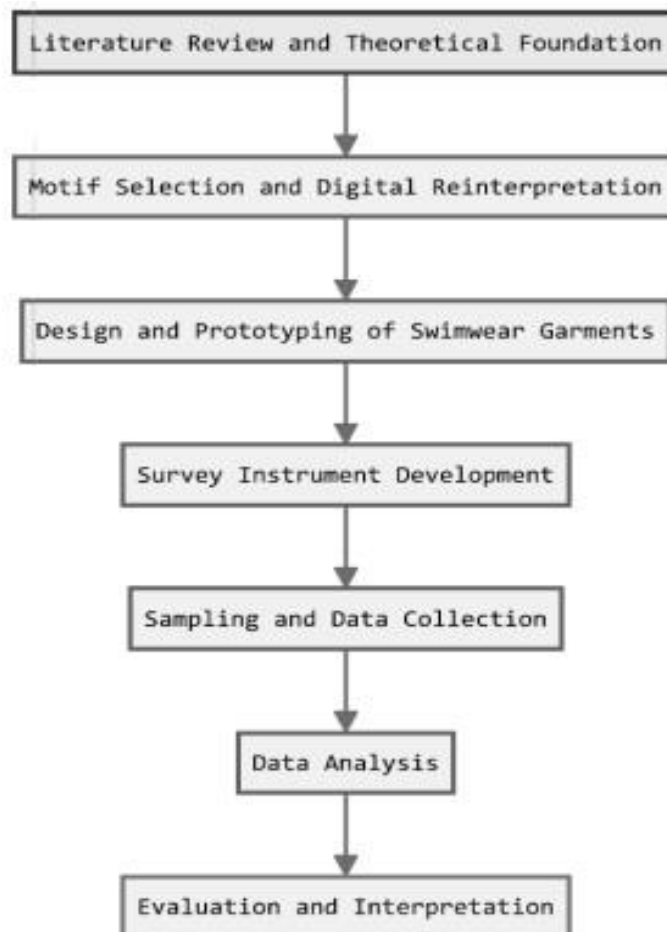
- Evaluation and Interpretation

Findings from the quantitative analysis were interpreted in the context of cultural aesthetics, consumer behaviour, and design innovation. The results were triangulated with feedback from a focus group of modest fashion designers and cultural heritage experts to ensure validity and relevance.

3.2. Expert Panel Evaluation and Data Collection

The research employs a dual evaluation approach combining expert assessment and consumer feedback. Five fashion and textile design experts were interviewed to evaluate the swimwear designs based on aesthetic quality and visual appeal, appropriate application of cultural motifs, functional design considerations, market potential and consumer appeal, and cultural significance and representation. Simultaneously, a survey was conducted among 100 Muslim women and men aged 20-30 years to assess overall design appeal and preferences, perception of cultural representation and significance, willingness to purchase and use the designs, price point considerations, and comfort and functionality expectations. This combined methodology ensures comprehensive validation from both professional design perspectives and target consumer viewpoints.

Figure 1. Research Design of Study



3.3. Data Analysis

The data collected through the survey was subjected to descriptive statistical analysis using SPSS software to obtain a comprehensive overview of participant responses. This analysis focused on identifying predominant preferences, recurring patterns, and potential areas for design improvement in Muslim swimwear that incorporates contemporary Nusantara motifs. Key variables measured included motif attractiveness, cultural resonance, garment functionality, and perceived suitability for religious modesty. Frequency distributions, measures of central tendency (mean, median), and cross-tabulations were used to explore correlations between demographic variables (such as age, regional origin, and swimwear usage frequency) and design preferences.

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The descriptive approach provided a quantitative foundation for understanding how different consumer segments perceive the integration of cultural motifs in swimwear. Additionally, visual aids such as bar charts and pie graphs were generated to highlight trends and simplify interpretation for comparative analysis (Pongratz & Diehl, 2017)

To complement the survey findings, qualitative analysis was conducted on data obtained from semi-structured interviews with expert informants, including modest fashion designers, textile heritage specialists, and cultural academics. Thematic coding was applied to the interview transcripts to identify emerging themes, such as cultural symbolism in fashion, design constraints in modest apparel, and user-cantered innovation. NVivo software facilitated the organization and synthesis of qualitative data into meaningful categories.

This triangulated analysis approach enabled the integration of consumer perspectives with expert insights, enhancing the depth and validity of the research findings. The combined methodologies provided a nuanced understanding of the aesthetic, cultural, and functional dimensions of Muslim swimwear embedded with localized cultural identity through Nusantara motifs.

4. RESULTS AND DISCUSSION

4.1. Expert Panel Evaluations

The expert panel evaluations revealed strong positive responses to the integration of contemporary Nusantara motifs in Muslim swimwear designs. Key findings include:

- **Cultural Authenticity**
Experts unanimously agreed that the designs successfully preserved the cultural essence of traditional motifs while presenting them in modernized forms appropriate for swimwear.
- **Design Innovation**
Four out of five experts highlighted the novelty of applying these motifs to functional swimwear, noting that this represents an underexplored area in Indonesia's modest fashion industry.
- **Technical Considerations**
Experts emphasized the importance of selecting appropriate textile printing techniques to ensure colour fastness and pattern durability in water and sun exposure conditions.
- **Market Potential**
All experts identified significant market potential for these designs, particularly among younger Muslim consumers seeking fashionable modest wear that reflects cultural identity.

4.2. Consumer Acceptance Survey

The consumer survey results demonstrated strong acceptance of the designed Muslim swimwear with contemporary Nusantara motifs:

- **Design Preference:** 78% of respondents expressed positive impressions of the designs, with particularly strong preference (85%) among female respondents aged 25-30.
- **Cultural Significance:** 82% of respondents valued the cultural representation in the designs, with many commenting that they appreciated seeing traditional elements in functional modern clothing.
- **Purchase Intent:** 73% indicated willingness to purchase the designed swimwear, with price point expectations ranging between IDR 350,000-500,000.
- **Motif Preferences:** Among the five motifs, designs incorporating patterns derived from Javanese batik and Sumatra *songket* received the highest preference ratings (87% and 83% respectively).
- **Functional Expectations:** 90% of respondents prioritized comfort and durability alongside aesthetic considerations, emphasizing the need for suitable fabric selection in the final products.

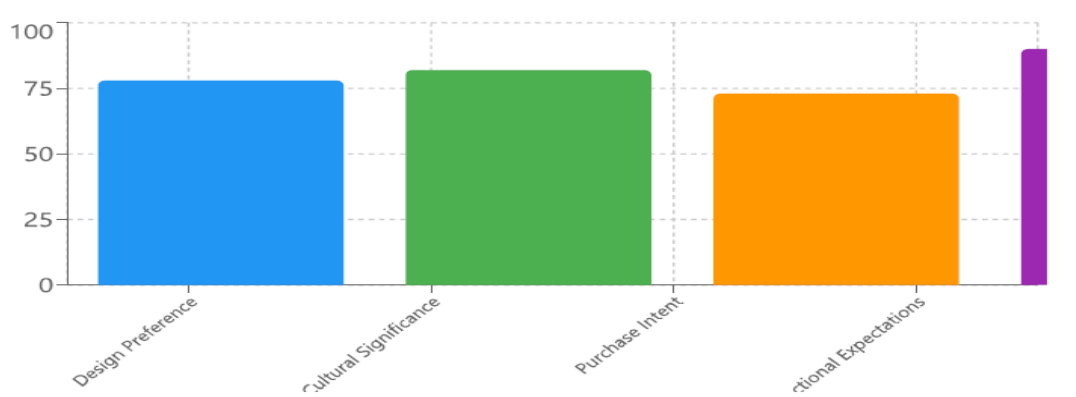


Figure. Consumer Acceptance Survey Result

4.3. Design Implications

Drawing upon a rich combination of expert insights and consumer feedback, several thoughtful refinements were made to the original design concepts. These adjustments were guided by a commitment to preserve the cultural essence of the motifs while ensuring their appeal and functionality in a contemporary swimwear context. A multinational survey study found that consumers prefer clothing with folk motifs that are reinterpreted to align with modern fashion preferences. Based on feedback from over 500 respondents, the researchers created customized fabric patterns combining traditional aesthetics with contemporary design sensibilities (Indrie et al., 2021)

One of the most notable changes involved colour palette adjustments. Although the traditional motif structures remained intact, the colour schemes of two key designs were thoughtfully reimaged. This change was driven by the desire to resonate more deeply with modern fashion sensibilities, introducing hues that felt fresh and current without compromising the heritage embedded in the original patterns.

Motif placement also underwent careful reconsideration. To maximize visual impact, placements were strategically refined, enhancing the overall aesthetic of each piece. At the same time, functional aspects of swimwear design—such as seam placement, stretch, and movement—were taken into account to ensure that the motifs not only looked appealing but also worked well with the contours of the body during wear.

Further, based on repeated feedback regarding proportions and visual harmony, several designs were adjusted in scale. Some motifs were subtly enlarged or reduced, enhancing their balance on different garment types and body sizes. These scaling modifications played a crucial role in preserving the rhythm and flow of the patterns when viewed from various angles.

Lastly, the selection of textile materials became a focal point of refinement. Expert consultations highlighted the importance of using fabrics that would uphold the intricate detail and vibrancy of the designs while also meeting the technical demands of swimwear—such as elasticity, durability, and comfort. This prompted an in-depth exploration of innovative materials that could seamlessly blend aesthetic fidelity with practical performance. In summary, these design refinements reflect a holistic approach—balancing artistic integrity, contemporary appeal, and functional excellence to elevate the final swimwear collection.

5. CONCLUSION

This research demonstrates the successful application of contemporary Nusantara motifs to Muslim swimwear designs, creating products that balance religious requirements, cultural significance, and modern aesthetic preferences. The strong positive response from both experts and potential consumers indicates significant market potential for culturally-inspired modest swimwear in Indonesia and potentially global markets. The research contributes to the growing body of knowledge on modest fashion innovation while providing practical insights for designers and manufacturers seeking to incorporate cultural elements into functional modern garments. By bridging traditional cultural heritage with contemporary design needs, this approach creates added value in Muslim fashion products through meaningful cultural connections. Future research directions include exploring appropriate textile materials and printing techniques for optimizing the durability and functionality of the designed swimwear, as well as investigating broader applications of contemporary Nusantara motifs across other modest fashion categories.

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