



Development of female wedding gowns using coloured fabrics needs design preferences and fabric selection

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Abstract

The traditional dominance of white wedding gowns has long shaped bridal fashion; however, changing fashion trends, cultural diversity, and the need for sustainability have created a growing interest in coloured wedding gowns. Despite this shift, there is limited empirical evidence on the perceived needs, design preferences, and fabric choices for coloured bridal wear among young females, particularly in Nigerian university settings. This study therefore investigated the development of female wedding gowns using coloured fabrics with emphasis on consumer needs, preferred designs, and suitable fabrics. The study adopted a descriptive survey research design to examine and promote female youths' interest in coloured wedding gowns. The population consisted of 2,171 female undergraduate students at Delta State University, Abraka, from which 100 respondents were selected using simple random sampling. Selection involved numbering slips from 1 to 150, shuffling, and allowing students to pick, with those selecting numbers 1 to 100 included. Data were collected using a structured questionnaire aligned with the research objectives. The instrument was validated by experts, including lecturers and a tailor. All questionnaires were retrieved, and data were analyzed using simple percentages and mean statistics. The analysis was carried out using simple percentage based on Yes or No responses from twenty questionnaire items. The items were grouped into sections to capture respondents' opinions on needs for coloured wedding gowns, design preferences, and fabric selection. The results showed that most respondents agreed that coloured wedding gowns are elegant, reusable after wedding, and enhance uniqueness, although views differed on cost and colour preference, with cream emerging as the most preferred colour. In terms of design, the ball gown style was most preferred compared to trumpet, fitted flare, and mermaid styles. For fabric selection, net fabric recorded the highest preference due to its comfort, lightness, and adaptability.

Keywords: Coloured wedding gowns, bridal fashion, design preferences, fabric selection, fashion innovation



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Introduction

The use of coloured materials in the making of female wedding dresses has been getting more attention in the modern day fashion because of the changing consumerism, culture and the concern of sustainability. A wedding dress is an official dress worn by a bride in a wedding ceremony and which is symbolical of elegance, beauty and cultural relevance. Wedding gowns traditionally are white to signify purity, but modern times give the gowns different colours, styles, and fabrics to signify their own preferences and cultural variations (Zhao et al, 2026). They are designed in various shapes including ball dress, mermaid and A-line and in most cases they have decorative pieces like lace, embroidery, beads or sequin. The fabrics used are usually silk, satin, chiffon and organza as these are comfortable to wear and also look good. White wedding dress has been used as a symbol of purity and conformity traditionally, but with the evolution of the modern day bridal dress, there has been a move towards customization, creativity, and functionality. This has brought an increased desire to investigate coloured wedding dresses, their taste in the choice of designs and suitable choice of fabrics (Ibrahim et al, 2024).

The wish to have uniqueness and express himself is one of the biggest requirements towards the creation of coloured wedding gowns. Modern brides are growing more and more interested in gowns which express their personality, sense of culture and uniqueness instead of being conservative. According to recent research, the new fashion in wedding dress is based on originality and an individual approach, as brides explore various colours, textures, and accessories (Vasileva and Vladimirovna, 2025) . Coloured fabrics like cream, blush, blue, and peach enable brides to be highlighted and yet be graceful. Moreover, coloured gowns are versatile, as they can be utilised to other events, which corresponds to the increasing tendency towards the sustainable fashion practice. The single-use nature of bridal fashion, particularly in relation to textile usage, has been repeatedly criticized. Scholars have highlighted the environmental impact of fabrics and materials used in wedding garments, including issues of waste and limited post-event utility. This concern has, in turn, encouraged the development and selection of textiles that support reuse, adaptability, and long-term durability in bridal design (Kwon, 2017; Azonuche et al, 2023) .

Affordability and accessibility is another crucial need. Wedding dresses with coloured are deemed to be more viable investments as they can be used after the wedding. This practicality makes them affordable to the cost-sensitive consumer and makes them attractive. Moreover, the rebirth of traditional and culturally inspired fabrics has also led to the introduction of colour fabrics in bridal attires. Studies indicate that wearing custom fabrics contributes to the preservation of the culture as well as the inclination and acceptability of non-traditional wedding dresses among consumers (Urip et al, 2025). This brings out the social-cultural applicability of coloured wedding gowns in the local and international settings. Female wedding dresses are very diverse in terms of styles based on fashion, body image and cultural norms. The ball gowns are some of the most popular designs and are treasured due to their dramatic shape and classicism. Ball gowns make one feel grand and are commonly related to the fairy-tale weddings. Fitted designs (mermaid and trumpet gowns) on the other hand focus on body shapes and are favored by brides that prefer a more modern and sophisticated appearance (Paone, 2025). This variety of design choice demonstrates the dynamism of the bridal fashion, which contains both traditional and modern designs. Researchers have noted that wedding gowns in the modern world have been blended in various ways to enable the bride to incorporate tradition and creativity (Liudmyla, 2025) as well.

The preferences in design are also affected by the technological innovations and the creative experimentation in fashion. Light-integrated fabrics, removable parts, and hybrid shapes are also some of the new design elements being introduced by designers to improve functionality and appearance. Roy and Ahmed (2025) argue that integration of technology in the fashion design has increased the opportunities of designing distinctive and adjustable wedding gowns that can suit various consumer needs. These inventions also contribute to the popularity of coloured fabrics, because they can be used to express creativity and can be altered. The type of fabric used in the creation of female wedding garments is a very important aspect of its development as it defines the general look of the garment, its comfortability and stability. Net and silk are very fashionable fabrics that may be chosen because of their beauty and practicality. Netting can be used as a lightweight and decorative base to enhance layering and embellishment, whereas silk has a luxurious feel and a beautiful drape (Lee & Suh, 2024). Conversely, other patents such as chiffon and organza despite their attractiveness might not be as popular because they are delicate and lack the structural support.

Sustainability and innovation in the production of the fabric is also closely related to the fabric selected. The recent studies stress the need to choose the materials which are not only environmentally friendly, but also can be used in a variety of ways. The revival of ancient fabrics and the creation of environmentally friendly methods of fabric production have had a great impact on the contemporary fashion design (Ricciardi et al, 2026). These strategies not only add to the beauty of wedding dresses but also lead to responsible consumption and environmental protection. In addition, the choice of the fabric should be based on the climate, comfort, and occasion. As an example, light materials would be used in warm conditions where heavy materials would be used in colder seasons to have structure

and warmth. The combination of the type of fabric and design style eventually defines the functionality and attractiveness of the gown.

This research is relevant in that it will help fill in the gaps that are beginning to emerge in the modern world of bridal dressing especially the limited empirical research on coloured wedding dresses, even with increased consumer interest. Sustainability and reuse of fashion is highlighted in the literature (Ghunake, 2026; Iwuno, 2025), although scant focus is laid on how coloured bridal wear can help achieve these objectives. Also, although design innovation has been extensively studied (Cheng et al, 2026; Chukwurah et al, 2020), a lack of research exists between design preferences and culturally meaningful colour preferences and material appropriateness. This work thus offers combined information on needs, design choices as well as fabric choices with practical suggestions to designers and contributes to the existing body of knowledge in the development of modern bridal fashions.

Objectives

1. Determine the needs for developing wedding gown for female using color fabric.
2. Determine the design preference for a developed wedding gown for female.
3. Determine some fabrics suitable for female wedding gowns

Research Questions

This study attempts to answer the following research questions.

1. What is the need for developing wedding gowns using color fabric?.
2. What are the design preference of wedding gowns for female?
3. What are the fabrics used in making female wedding gowns?

Method

The research took the descriptive survey research design to seek to discover and foster the curiosity of the female youths towards the beauty and meaning of coloured wedding gowns. The sample included all the female undergraduate students in Delta State University, Abraka with a population of 2,171 students. A sample of 100 respondents was picked out of this population by a simple random sampling method. Selection was done by numbering pieces of paper (1 150), mixing them and letting students of the various departments pick at random. Individuals that picked numbers between 1 and 100 were incorporated in the study. The researcher used a structured questionnaire to collect data to use in the study (Anyakora & Odimegwu, 2021). The instrument has been divided into sections that are in line with the research questions and the respondents were enabled to give their views by making the right choice. The supervisor of the researcher, two lecturers in the department and a professional tailor, who also checked the original version, provided the opportunity to make corrections to the first draft which then enabled the researcher to create the final version. The questionnaires were administered by the researcher with the help of the research aids in directing the respondents the questionnaires. The complete number of copies sent out (100) was returned with all the forms filled in, hence a high response rate. To analyze data, simple percentage was applied to discuss the responses of the respondents and mean was applied to find out the mean body measurements of the female respondents.

Results

The analysis of the research question were carried out by using simple percentage as response alternative items (Yes) or (No) out of twenty items in the questionnaire. The questionnaire was draw as follows: 1-8 were to test research question 1. Item 9-12 were to test research question 2. Item 13-16 is to test research question 3. Table 1 shows that 42% of the respondents says yes that coloured wedding gown is not expensive and 58% said no, 66% of the respondents agreed that colour wedding gown looks elegant when worn, and 34% said no. Also 86% of the respondents answered yes that colour wedding gown can be used after the wedding, 14% answered no. 64% that colour wedding gown will make their day look unique and special, 36 answered no to it. 30% of the respondents

prefers pink colour gown, 70% said to pink gown. 56% prefers cream colour gown, while 44% said no 34% prefers peach, 66% said yes to blue colour gown 64% said no to blue colour.

Table 1: Respondents’ Perceived Needs for Developing Female Wedding Gowns Using Coloured Fabric and Preferred Colour Choices

S/N	NEEDS FOR DEVELOPING WEDDING GOWN USING COLOURED FABRIC	YES	YES%	NO	NO%
1.	Coloured wedding gowns are not expensive	42	42	58	58
2.	Coloured wedding gowns look elegant when worn	66	66	34	34
3.	It can be used after the wedding	86	86	14	14
4.	Coloured wedding gown will me look unique and special	64	64	36	36
WHAT COLOUR OF WEDDING GOWN DO YOU PREFER					
5.	Pink	30	30	70	70
6.	Cream	56	56	44	44
7.	Peaen	34	34	66	66
8.	Blue	36	36	64	64

This therefore means that majority of the respondents agreed that to development of female wedding gowns are not expensive, they are elegant, make ones wedding looks different, unique and above all, coloured wedding gown can still be useful after the wedding day. Unlike white colour wedding gown that is just to the box after wedding. Cream colour gown was preferred more than the other in this research.

Table 2: Respondents’ Preferred Design Styles for Female Wedding Gowns

S/N	PREFERED DESIGN	YES	YES%	NO	NO%
1.	Trumpent gown	20	20	80	80
2.	Ball gown	82	82	18	17
3.	Fitted fled gown	38	38	62	62
4.	Mer-maid gown	36	36	64	64

Table 2 indicated that 20% of the respondents says yes to trumpent, 80% says no 82% accepted ball gown, and 18% rejected it. 38% accepted fitted fled down gown, 62% rejected it. And 36% says yes to mermaids gown. While 64% said no. It therefore means that respondent preferred Ball gown for female wedding gown against others.

Table 3: Respondents’ Preferred Fabric Types for Female Wedding Gown Designs

S/N	PREFERED DESIGN	YES	YES%	NO	NO%
1.	Net	54	54	46	46
2.	Silk	48	48	52	52
3.	Chiffon	20	20	80	80
4.	Organza	24	24	76	76

Table 3 shows that 54% of the respondents choosed net while 46% rejected Net, of the respondents choose silk, 52% rejected silk. 20% of the respondents choose chiffon, 80% rejected chiffon. 24% of the respondents choose organza, 76% rejected Organza. This means that majority of the respondents preferred net fabric as best for female wedding gown. Because it is cool, light, easy to wash, it fit for any kind of weather and it looks more beautiful on wedding gowns.

The results of this research were explained and analysed in the context of recent academic sources with the focus on concurrence and dissimilarity in the needs, preference in designs and fabric choice. In case of the Research Question One, the findings showed that 66% of the participants agreed

that coloured wedding gowns are elegant and 86% of them said that they can be reused after a wedding. This observation concurred with that of Ibrahim et al. (2024), who pointed out that the design of multi-purpose wedding gowns can greatly increase the life cycles of the products and promote sustainable fashion consumption. Conversely, Zhao et al. (2026) posited that bridal fashion training continues to heavily focus on white gowns and this could restrict the use of coloured options. Moreover, 64% of the participants said that coloured gowns make weddings special and unique, which aligns with Vasileva and Vladimirovna (2025), who have discovered that personalisation and identity expression is a major factor in the modern bridal fashion. Nevertheless, only 42% of them saw coloured gowns as cheaper which is in line with Kwon (2017) who reported that sustainability does not always decrease the cost of production and buying.

In terms of colour preference, cream (56%) was most preferred followed by blue (36), peach (34), and pink (30). In a similar research, Liudmyla (2025) noted that there is a growing inclination towards neutral and flexible bridal tones because of their versatility and re-use. Conversely, Roy and Ahmed (2025) noted that digital fashion innovation is promoting experimentation with bold and unusual colours, which may be indicating that the conventional consumer preference is going to be in contrast with the fashion trends advanced by technologies. In Research Question Two, the preferences on the design style were found to be highest on ball gowns (82%), then, the Trumpet (20%), fitted flare (38%), and mermaid gowns (36%). This observation was in line with that of Paone (2025) who noted that the voluminous and dramatic forms of dressing are still dominant in the ceremonial fashion because of their symbolic and aesthetic influence. Conversely, Lee and Suh (2024) have indicated that AI-based system of fashion design is popularizing minimalist and adaptive silhouettes, which is a sign of a change towards modernized design ideation. On the same note, Urip et al. (2025) noted that preservation of cultural heritage has kept supporting traditional design structures, justifying the preponderance of ball gowns in this research.

In Research Question Three, it was found that net fabric (54%) was most preferred, and then silk (48%), chiffon (20%), and organza (24%). This observation was in line with Ghunake (2026) who opined that smart and lightweight fabrics are gaining more popularity because of their comfort, climate versatility, and aesthetic functionality. Conversely, Ricciardi et al. (2026) also reported that luxury silk fabrics continue to dominate elite bridal markets because they are prestige positioned in slow fashion systems towards sustainability. Nonetheless, Cheng et al. (2026) observed that AI-based design tools are broadening the exploration of alternative combinations of fabrics, which advantages the diversification of materials. Similarly, Liudmyla (2025) highlighted the adoption of eco-friendly fabrics as the trend in the production of bridal wear, which contributes to the move towards sustainable textile selection.

Conclusion

The research on designing and designing wedding gowns in coloured fabrics based on the needs and designing preferences as well as the choice of fabrics, indicates that the respondents have a high positive attitude towards coloured bridal gowns. The results show that coloured wedding gowns are commonly perceived to be elegant, unique and reusable thus both aesthetic and sustainability issues in the contemporary fashion are met. Cream turned out to be the most desirable colour and it is a sign of a blend between the traditional and contemporary style. The style most preferred was the ball gown, in terms of design, and this continued to show an interest in voluminous and traditional design. In terms of fabric used, net fabric was most preferred and this indicates that comfort, lightness, and appearance are the main factors when choosing a fabric. It comes to a conclusion that the use of coloured wedding gowns is an option to the conventional white gowns; it is a viable and an innovative choice that incorporates cultural expression, functionality and fashion trends in bridal gowns.

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