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# ANALYSIS OF TEENAGERS' CLOTHING USING NATIONAL PATTERN ORNAMENTS

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**Annotation.** The article analyzes teenagers' clothing using national pattern ornaments. In this article, the styles, colors, sleeve shapes and types of processing inside the sleeves of teenage clothing are presented on the basis of diagrams during the implementation of teenage questionnaires.

**Keywords:** teenagers, style, shape, ornament, model, style, colors, length, consumer, sustainability, outerwear, price, quality, national pattern.

**Annotatsiya**. Maqolada milliy naqshli bezaklardan foydalangan holda o'smirlar kiyimlari tahlil qilinadi. Ushbu maqolada o'smirlar kiyimlarining yenglari ichidagi uslublar, ranglar, yeng shakllari va ishlov berish turlari o'smirlar so'rovnomalarini amalga oshirish paytida diagrammalar asosida taqdim etilgan.

**Kalit so'zlar:** o'smirlar, uslub, shakl, bezak, model, uslub, ranglar, uzunlik, iste'molchi, barqarorlik, tashqi kiyim, narx, sifat, milliy naqsh.

**Аннотация.** В статье анализируется одежда подростков с использованием национальных орнаментов. В этой статье представлены фасоны, цвета, формы рукавов и виды обработки внутренней части рукавов подростковой одежды на основе диаграмм, полученных в ходе проведения подросткового анкетирования.

**Ключевые слова:** подростки, стиль, форма, орнамент, модель, фасон, цвета, длина, потребитель, экологичность, верхняя одежда, цена, качество, национальный узор.

## INTRODUCTION

Adolescents' basic wardrobe is closely related to their personal expression, mental state, and social status. Adolescents understand themselves and their place in society through their clothes, which influences their clothing choices. Some adolescents prefer to wear conspicuous clothes, while others tend to dress in a style they have invented for themselves or in a casual way [55,57]. We analyzed the results of studies and questionnaires conducted by us. Question 1: How old are you? This question has 3 answer options: 11-12 ears, 13-14 ears, 15-16 ears. We also took into account the gender of the adolescents.



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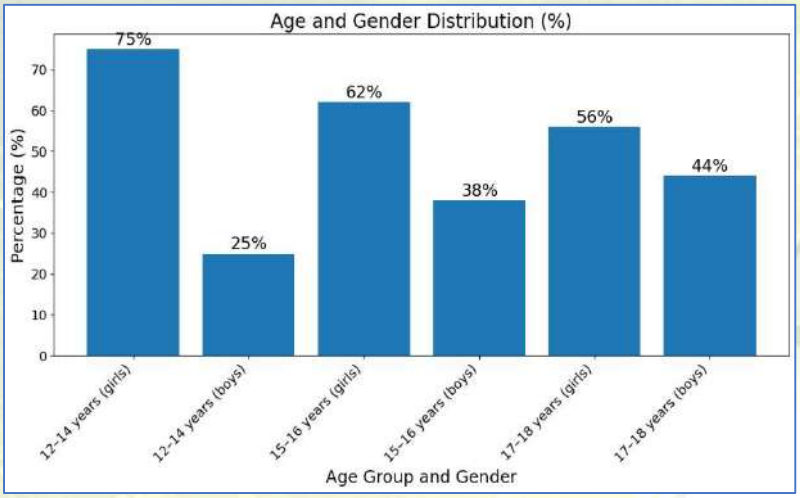



**Figure 1. Analysis of respondents by gender and age characteristics**

The survey was conducted among 385 schoolchildren - teenage girls and boys. The demographic analysis is as follows, and the gender and age characteristics of the respondents are shown in Figure 3.1. There were 124 participants aged 12 to 14 ears, which is 28% of the total respondents, 134 adolescents aged 15 to 16 ears, which is 40%, and 127 adolescents aged 17 to 18 ears, which is 32.9% of the respondents. In terms of gender, 93 (75%) of the 12-14 ear olds were girls and 31 (25%) were boys; 83 (62%) of the 15-16 ear olds were girls and 51 (38%) were boys; and 71 (56%) of the 17-18 ear olds were girls and 56 (44%) were boys. (Figure 1)

The first question, the frequency of visiting clothing stores, showed that the majority of teenagers, 31.6%, visit them several times a week, 28.9% - several times, 23.7% - once a month, 7.9% - less than once a month, shops are part of their lives and this process occurs regularly (Figure 2).

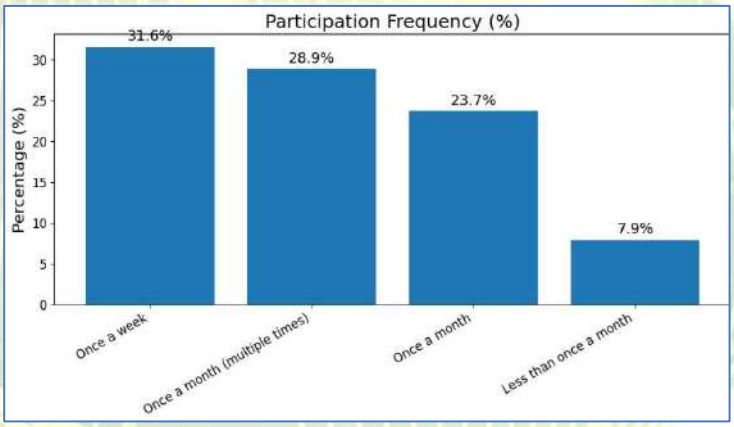



**Figure 2. Frequency of teenagers visiting clothing stores**

Further research has shown that the main criteria that teenagers use when choosing clothes are as follows (Figure 2.2.5): price (68.1%), quality (54.2%), fashion (51.3%), style (39.6%), seasonality (34.8%) (Figure 3).



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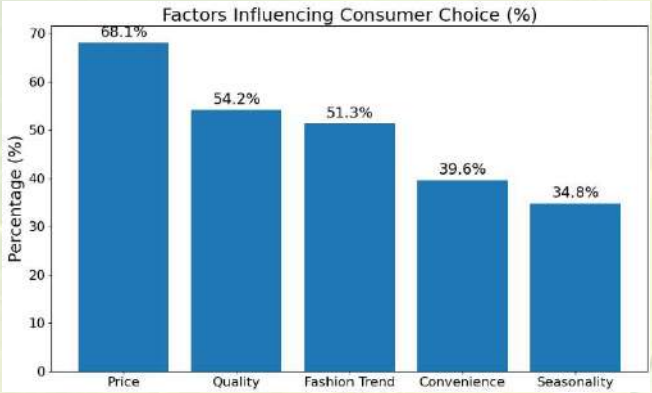



**Figure 3. The main criteria for choosing clothes for teenagers**

When choosing a style of clothing, respondents like to experiment and choose different styles, 32.2% chose a sporty style, 29.3% a classic style, 28.4% an oversized style (large volume), 7.5% a fantasy style and 2.6% other styles (Figure 4). Thus, 29.3% of respondents said that they prefer conservative ideas and stylish clothes when choosing clothes; 70.7%, on the contrary, chose other styles.

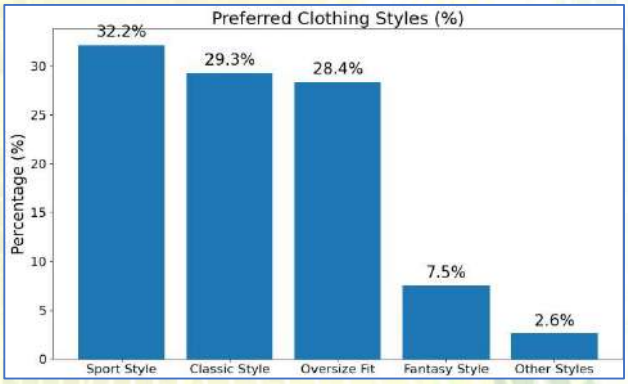



**Figure 4. Analysis of teenagers' clothing style choices**

The majority of respondents do not have specific colors that are a priority when choosing clothes, that is, bright colors do not play a big role in buying and wearing clothes for teenagers. It was found that teenagers pay more attention to the following principles when choosing clothes: elegance (35.5%), harmony (41.2%), proportionality (39.8%), functionality (47.8%). Also, some respondents added such principles as comfort and compactness (Figure 5).

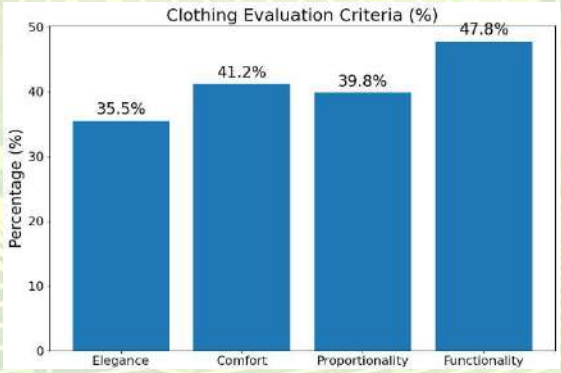



**Figure 5. Principles that teenagers pay attention to when choosing clothes**



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If we consider each questionnaire separately, most of the respondents, men, prefer convenience, simplicity and functionality when choosing clothes, while women choose elegance, proportion and harmony. The study showed that when choosing clothes, the majority of respondents (70.2%) are guided by their own opinion, 29.8% listen to others. Although the price factor is crucial, fashion and aesthetic principles are also not ignored. Therefore, clothing manufacturers and sellers should develop collections and marketing strategies taking these factors into account.

The use of national patterns and ornaments in the collection of teenage clothes is widespread in the world of design and fashion, but in each culture different approaches are required to meet the requirements. The purpose of the survey on the use of national patterns in the collection of teenage clothes was to study how teenagers perceive national fashion and its elements, as well as their opinions on the use of these elements in clothes. The responses were collected through various questionnaires, taking into account the age group, gender, cultural and social conditions of the teenagers participating in the survey. The questions were aimed at determining the use of national patterns and ornaments in clothes among teenagers, their personal taste and aesthetic views, and how these elements are perceived from the point of view of fashion design and clothing creation. The main results of the survey showed the following aspects:

Interest in national patterns and ornaments, that is, more than 60% of the teenagers who participated in the survey expressed interest in national patterns and ornaments. For them, national elements are not limited to the fact that they are aesthetically beautiful in clothes, but they also pay great attention to the historical and cultural significance of these elements. Most teenagers noted that national patterns and ornaments look fashionable, add uniqueness and individualism to them. (Figure 6)

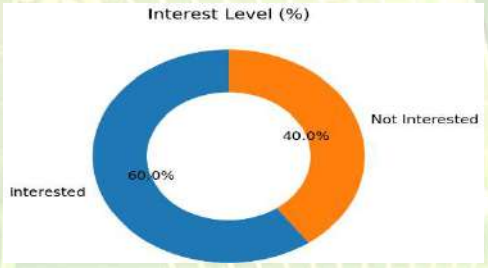



**Figure 6. Teenagers' interest in having national patterns on their clothes**

The use of national ornaments in clothing design, i.e. more than 50% of wearers do not want to use national patterns in their everyday clothes, but expressed a desire to use these elements at special events, holidays or festivals. Teenagers appreciate national patterns more at holidays or special events (Fig. 7)



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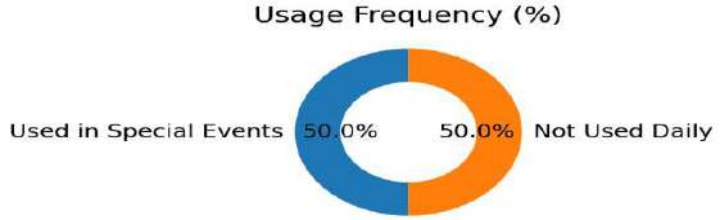



**Figure 7. Levels of teenagers' use of decorative clothing**

There is a debate among teenagers about aesthetic views on clothing, that is, the aesthetic aspects of using national ornaments on clothing. For many, such ornaments are important in expressing respect and confidence in their cultural heritage. However, it was observed that some teenagers consider such ornaments to be non-traditional and outdated. In this case, they emphasized that national ornaments should be combined with new and modern styles. (Figure 8)

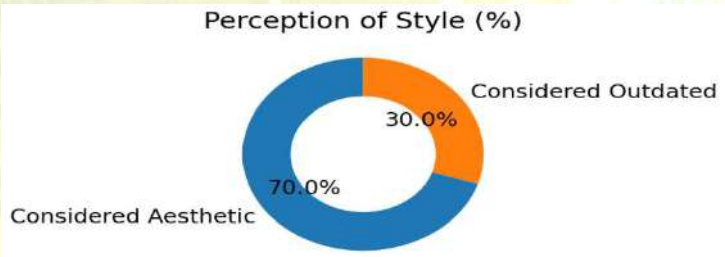



**Figure 8. Teenagers' attitudes towards patterns in clothing**

Social and cultural influences, namely the rapid spread of social media and global fashion, have a significant impact on teenagers' clothing choices. Some teenagers compare national patterns and ornaments with popular trends around the world and say that they often do not fit their fashion. They also prefer national patterns and ornaments that are combined with modern styles. (Figure 9)

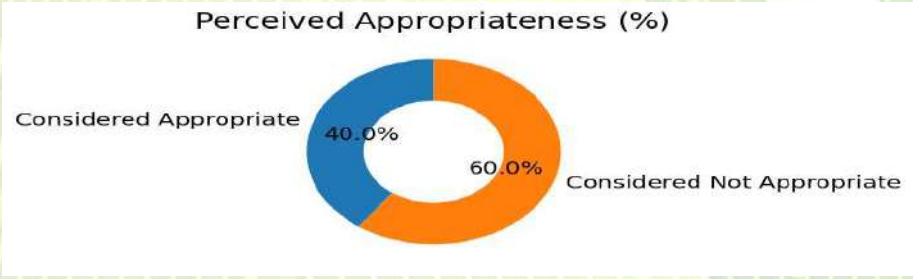



**Figure 9. The influence of teenagers' patterned clothing on global trends**

The future of national elements, that is, many teenagers expressed their expectation that national ornaments will be incorporated into modern clothing designs and adapted to new trends. Therefore, the modernization and presentation of national elements in innovative ways is appreciated by teenagers



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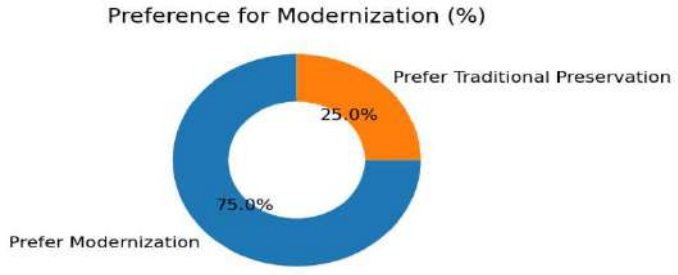



**Figure 10. The image of future national elements in the imagination of adolescents**

Based on the survey results, the use of national patterns and ornaments in the clothes of adolescents is closely related to the cultural and aesthetic views of adolescents. (Figure 10). Adolescents identify themselves within their own social groups and subcultures. National patterns can be used as an important tool in ensuring that adolescents belong to their own group.

Parents of teenagers have noted that the material wear of clothing has a significant impact on the lifespan of the clothing. This is because boys are more active than girls. Therefore, when designing teenage clothing, it is necessary to take into account the lifespan and impact of boys' and girls' clothing.

## LIST OF REFERENCES

1. Tokhtaeva Z.Sh., Abulova P.U. Designing the technological process of sewing a teenage shirt. Research And Education. international scientific journal. 1(7), Retrieved from. 2022. – P. 186–195.
2. http://researchedu.org/index.php/re/article/view/421
3. Usmanova N.A. Intellectualization of the processes of forming industrial collections of women's shirts. – Tashkent, 2025. – 133 p.
4. Xolbayeva, L. Social and cultural aspects of clothing design. Fashion and Society Journal, 10(6), 2020. – 71-77 p.
5. To‘xtayeva Z.Sh, Abulova P.U. Environmental requirements of teenage clothing. “Muhandislik fanlarini o‘qitishning dolzarb muammolari va echimlari” mavzusidagi Respublika ilmiy-texnik anjumani, Termiz. 2022. – 331-334 b.
6. To‘xtayeva Z.Sh, Abulova P.U. Analysis of physical and morphological parameters of silk fibers in the aesthetic properties of silk fabrics. E3S Web of Conferences 548, 08010 (2024). – P. 25-29.
7. Муминова У.Т., Ташпулатов С.Ш., Черунова И.В., Шарипова С.И. Разработка методологии комплексного проектирования детской одежды. Publisher: Курск. Издателствово «Университетская книга», 2020. – С.173.
8. Шарипова С.Т., Нигматова Ф.У. Исследование удовлетворенности потребителей ассортиментом одежды из джинсовой ткани // Универсум: технические науки: электрон. научн. журн. 2023. – С. 10 (115).



ISSN 3030-3907

9. Муминова У.Т. Методология комплексного проектирования детской форменной одежды. Ташкент, 2020. – 248 стр.



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