

Optimum Choice of Fabric for Apparel Based on GSM and Yarn Count



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Abstract: *With the variety of fabrics available it is important to understand which GSM and yarn count consumer chooses before buying the final decision to buy apparel. This article is to understand what GSM and yarn count consumers optimally choose and why.*

Keywords: Grams per Square Meter (GSM), Yarn count, Thread Count

I. INTRODUCTION

In the textile and fashion world, consumer satisfaction relies on the quality of a product. Each consumer has a different perspective about the fabric quality depending on their own preference and end-use. Grams per square meter (GSM) and Yarn count/thread count are the most used measures to define product quality. If a consumer is choosing a bead spread, they look for a high thread count. Similarly, the consumer chooses high GSM fabric when looking for drapery or upholstery. When it comes to apparel choice of GSM and apparel depends and the season, type of apparel hence understanding consumer choice is very important to know the optimum choice of fabric before making apparel.

II. REVIEW OF LITERATURE

In a study conducted by Misra S. *et.al* (2020), creese recovery and thermal resistance increase with high GSM whereas low air permeability and weight of apparel decrease when GSM is lower. Hence Balancing the GSM is important to reach optimum comfort and consumer satisfaction[4] Thread count or yarn count has become a new norm to determine fabric quality. Hargrave, H. (1997). Mentions that “You can’t rely on a label or price for the quality of the fabric, considering thread count is the right way to determine the fabric quality.” [1]. Thread count is one of the important factors consumers consider before making a purchase decision. (Reham AS (2016). Thread count correlated with the weight and strength of the tested samples (Danquah Monnie and Winston Yao Sappor. 2020)[2],[3].

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As GSM of fabric and Yarn directly reflects on fabric quality and consumers always prefer to choose high-quality fabrics its important to know which GSM and Yarn count consumer prefers to make purchase decisions

III. METHODOLOGY

A group of five individuals who has extensive knowledge about GSM and yarn count was chosen as a focus group. This is the initial group that answered structured open-ended questions about the industrial selections and consumer choice of fabric by GSM and Yarn Count. Using the responses and suggestions received from the focus group a separate questionnaire was formed using google forms. As the terms GSM and Thread count were technical and prior knowledge about this necessary, the questionnaire is been distributed to the students and professors from Textile and Fashion designing departments of the National Institute of Fashion Technology, Hyderabad, who studied the basic textile constriction. Google form is created in such a way that if a participant answers no to the question about Having knowledge about GSM and Yarn count od woven and Knitted fabric survey will be ended for that particular participant. There are 105 responses received which were further analyzed to understand the consumer choice of GSM and yarn count in plain weave woven and lock stitch knitted fabrics. Participants were also given a choice to choose the reasons for preferring GSM and yarn counts

IV. RESULTS AND DISCUSSION

In all the responses received majority are female with 77%. Most of the are students pursuing graduation 77% followed by 14% of with Postgraduate degree in the field related to fashion and textiles.

This will allow you to determine the optimal GSM and yarn count choice of millennials. In cotton plain weave fabric, GSM between 125-150 g/m² is most popular with 53% followed by GSM of 176-200 g/m² with 18%. Whereas most popular yarn count 35-40 with 55% followed by yarn count of 41-45 with 21%.

Whereas cotton Knitted interlock fabric. GSM between 125-150 g/m² is most popular with 51% followed by GSM of 176-200 g/m² with 19%. Whereas most popular yarn count 35-40 with 57% followed by yarn count of 41-45 with 20%.

By looking at results it is understood that whether it is woven or knitted fabric choice of fabric in respect to GSM and yarn count is similar Participants have given more importance to the comfort of the fabric followed by the feel of the fabric



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V. CONCLUSION

Understanding consumer choice to design new appeal is very important, it is evident from previous studies, and this study that buyer looks for comfort and feel of the fabric both in woven and knitted fabrics which correlates with Fabric GSM and yarn count. Hence understanding the optimum choice of GSM and yarn count is very important to design and produce apparel.

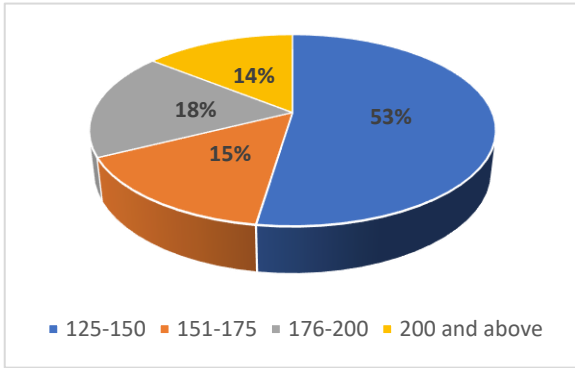


Fig. 1. Choice of GSM - Cotton (Plain weave)

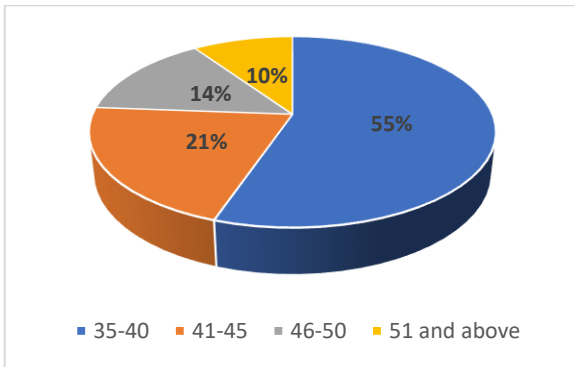


Fig. 2. Choice of Yarn Count - Cotton (Plain weave)

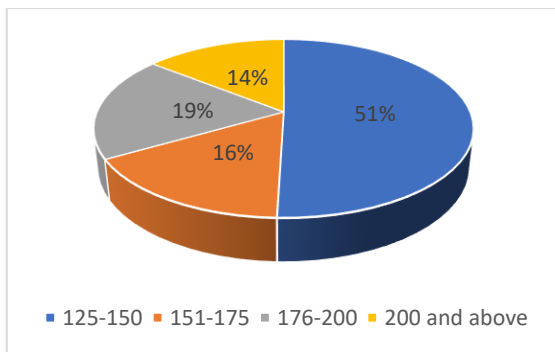


Fig. 3. Choice of GSM - Cotton Knitted (Interlock stitch)

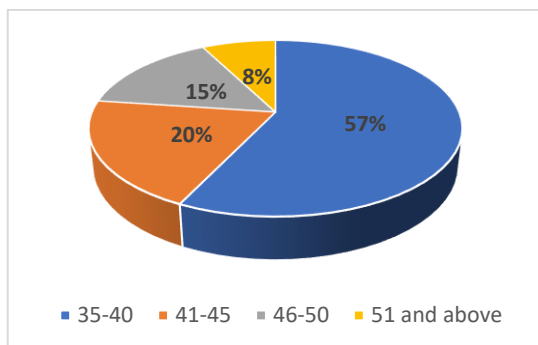


Fig. 4. Choice of Yarn Count- Cotton Knitted (Interlock stitch)

Reasons for you to choose specific GSM/Yarn count (Choose all suitable)

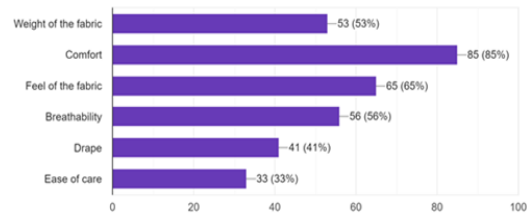


Fig. 5. Reasons to choose specific GSM/Yarn count

REFERENCES

1. Danquah Monnie, Winston Yao Sappor. Characteristics of Selected Lining Fabrics on the Ghanaian Market Used for Garment Construction. (2020). *Science, Technology & Public Policy*. Vol. 4, No. 1: 27-33
2. Hargrave, H. (1997). From fiber to fabric: The Essential Guide to Quiltmaking Textiles. C & T Pub.
3. Reham AS (2016). Consumer Attitude and Purchase Decision towards Textiles and Apparel Products. *World Journal of Textile Engineering and Technology*, 2016, 2, 16-30
4. Srabani Misra, Jana Salacova, Jiri Militky (2020), multicriteria decision-making in complex quality evaluation of ladies dress material. *AUTEX Research Journal*, Vol. 20, No 3, September 2020

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