A Study of Consumers' Experiences with Sportswear

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***Abstract*—This study aims to evaluate consumer experiences with the thermal performance of sportswear fabrics, focusing on moisture-wicking properties, comfort in various climatic conditions, and overall satisfaction. Primary data was collected from 140 respondents through a structured questionnaire, and the responses were analyzed using chi-square tests. The results show that while a majority of users appreciated the sweat-wicking capabilities of their sportswear, many still experienced discomforts due to fabric heaviness or clinginess, particularly in high-sweat areas. Furthermore, a significant portion of respondents felt too hot and sweaty in warm conditions, whereas in cold weather, feedback was mixed, with some users reporting discomfort while others felt adequately warm. Importantly, overall satisfaction with the thermal comfort of sportswear was low, with very few respondents expressing high satisfaction. These findings indicate a need for innovation in fabric technology, especially concerning breathability and temperature regulation, to meet user expectations across varying environmental conditions.**

***Index Terms*—Experience, Consumer, Sportwear, comfort.**

I. INTRODUCTION

In recent years, the sportswear industry in India has seen significant growth, fueled by increasing awareness about fitness, changing lifestyles, and the rising influence of social media and celebrity endorsements. Consumers are no longer viewing sportswear solely as functional clothing for athletic activities, but rather as a symbol of an active, healthy, and fashionable lifestyle. This shift has led to the emergence of the "athleisure" trend, where sportswear is worn both for exercise and casual outings. In urban and semi-urban areas, this trend is becoming increasingly visible, reflecting broader consumer preferences and lifestyle aspirations.

The current urban center presents a unique demographic mix of working professionals, students, and fitness enthusiasts. With increasing disposable incomes and greater access to national and international brands, consumers in are becoming more selective and brand-conscious about their purchases. Factors such as comfort, durability, performance, brand value, and style play crucial roles in shaping the consumer experience and satisfaction with sportswear products. Understanding these preferences is vital for marketers and retailers aiming to cater to this dynamic and expanding market.

The consumer experience with sportswear in urban cities are influenced not only by product quality but also by after-sales service, pricing strategies, availability across various retail formats (offline and online), and promotional campaigns. Brand loyalty, peer influence, and awareness of sustainability in fashion are also increasingly impacting consumer choices. As consumer expectations evolve, brands must adapt by offering innovative designs, eco-friendly materials, and seamless shopping experiences. Exploring these experiences can help identify gaps between consumer expectations and actual brand performance.

This study aims to evaluate and analyze the overall experience of consumers towards the use of sportswear in urban and semiurban city. It seeks to identify key factors driving purchase decisions, the role of marketing strategies, and the level of satisfaction among users. By examining consumer behavior patterns, preferences, and feedback, the study can offer valuable insights to manufacturers, retailers, and marketers striving to strengthen their position in the competitive sportswear market. Furthermore, it contributes to the broader understanding of urban consumer behavior in India's growing fitness and fashion landscape.

II. LITERATURE REVIEW

Recent studies have explored the evolving dynamics of consumer behavior and satisfaction in the Indian sportswear market. Sankar and Rishikesh (2020) found that modern consumers prioritize innovation in design and fabric technology alongside brand reputation, with attributes such as comfort, style, and durability playing dominant roles in influencing purchase decisions. Younger, fitness-oriented individuals were drawn to brands that offered functional yet trendy apparel, and though price remains a key consideration, there is a willingness to invest in products that reflect lifestyle aspirations. Manivel and Mohanalakshmi (2025) concluded that customer satisfaction is significantly shaped by product quality, availability, comfort, and brand reliability, with established labels enjoying higher customer retention due to their adaptability to fashion trends and athletic demands. Furthermore, Sharma and Jain (2019) underscored the strategic role of corporate social responsibility (CSR) in enhancing brand equity, showing that socially conscious consumers in urban areas respond positively to brands engaged in environmental and social initiatives, thus fostering trust and emotional loyalty.

Thermal comfort is a critical dimension of consumer experience in sportswear, particularly in climates with temperature extremes. Atalie et al. (2021) investigated bi-layered sportswear fabrics and found that combinations of polyester and elastane offered superior thermal resistance and water vapor permeability, enhancing comfort in colder conditions. However, breathability varied depending on fiber composition and layering, influencing consumer satisfaction during high-intensity activities. Tesinova and Atalie (2022) further emphasized that fabric structure and maintenance significantly affect thermal conductivity and moisture management. Their study revealed that polyester-based fabrics with elastane blends provided better thermal diffusivity and lower moisture absorption, aligning with consumer preferences for lightweight and breathable garments. Preetika et al. (2024) reviewed the development of sports textiles with enhanced thermoregulation and moisture transport. They highlighted that synthetic fibers outperform natural ones in quick-drying capabilities, but compression garments may hinder heat dissipation, leading to discomfort. The interplay between fiber geometry, yarn structure, and knit design was found to be pivotal in shaping thermal comfort. Consumers often report sensations of clinginess and wetness when moisture transport is inadequate, especially in warm environments. These findings underscore the importance of designing sportswear that balances thermal insulation with effective vapor transmission to meet user expectations. As the demand for climate-adaptive apparel grows, integrating ergonomic and physiological comfort into textile engineering becomes essential for improving consumer experience.

In parallel, Manna (2019) highlighted that purchasing decisions for high-value sportswear are increasingly influenced by lifestyle compatibility, emotional connectivity, and brand trust, with digital endorsements and online reviews shaping consumer preferences. The study emphasized that features like moisture-wicking fabrics and ergonomic fit increase product appeal, particularly among affluent and brand-conscious buyers. Bhardwaj et al. (2022) added that immersive brand experiences and personalized retail environments deepen consumer involvement and reinforce loyalty, especially among those who value emotional and sensory engagement while shopping. Gupta et al. (2013) investigated consumer behavior toward foreign brands and identified five key influencers: product quality, price sensitivity, brand familiarity, social status, and marketing communication. Their findings revealed that while Indian consumers are price-conscious, they often associate international brands with superior quality and prestige. Lastly, Jayasingh et al. (2022) examined omnichannel shopping intentions, concluding that seamless online-offline integration—coupled with convenience, detailed product information, and responsive service—enhances satisfaction and encourages purchase intent. These collective insights suggest that innovation, experiential engagement, and strategic branding are essential for success in India's growing sportswear market.

III. RESEARCH GAP

The reviewed literature highlights various factors influencing consumer behavior toward sportswear, such as brand trust, comfort, innovation, CSR, omnichannel experience, and emotional connectivity. However, a significant research gap remains in

understanding regional consumer behavior, especially in emerging urban districts, which has a unique blend of middle-class and upwardly mobile consumers. Most studies focus on metropolitan regions or generalized national samples without exploring how local cultural preferences, climate conditions, and socio-economic diversity influence sportswear consumption. Furthermore, limited research has been conducted on post-purchase behavior, local brand perception versus global brands, and the role of digital influencers specific to Tier-2 cities. Addressing this gap could offer valuable insights into tailored marketing strategies and product innovation in under-explored yet rapidly growing markets.

Objective of the study

- To evaluate consumer experiences with fabric properties and performance in sportswear applications.
- To examine consumer satisfaction levels related to wearing sportswear in warm/hot and cold climatic conditions.
- To assess consumer perceptions of thermal comfort offered by sportswear across varying temperature environments

IV. METHODOLOGY

The study adopted a descriptive research design to understand the thermal comfort experience of sportswear consumers in urban and semi urban cities in Mumbai. A structured questionnaire was administered to a sample of 140 respondents selected using convenience sampling. Data collection focused on three key objectives: consumer experience with fabric properties, perception of comfort in warm and cold climates, and overall satisfaction with thermal comfort. Quantitative data were analyzed using chi-square tests to determine the statistical significance of response variations across different categories. All items met the assumption of minimum expected frequencies, ensuring the reliability of results. The methodology ensured systematic analysis and objective interpretation, thereby lending robustness to the study findings.

Data Analysis and Interpretation

Demographic Factor

Sr No.	Particular	Category	Frequency	Percent
1	Gender	Male	99	70.7
		Female	40	28.6
		Others	1	.7
2	Age	Up to 25 Years	75	53.6
		26 to 35 Years	35	25.0
		36 to 45 Years	21	15.0
		46 to 60 Years	7	5.0
		Above 60 Years	2	1.4
3	Type of sport/activity	Cricket	34	24.3
		Gym	31	22.1
		Running	34	24.3
		Walking	41	29.3
4	Frequency of sportswear usage	Daily	114	81.4
		3-5 times per week	3	2.1
		1-2 times per week	20	14.3
		Occasionally	3	2.1

The demographic frequency data reveals insightful patterns about the participants in the study. Out of 140 respondents, a substantial majority were male (99 or 70.7%), followed by female participants (40 or 28.6%), with only 1 respondent identifying as 'Other' (0.7%). Age-wise, the largest group was individuals up to 25 years (53.6%), indicating that younger consumers form the core demographic for sportswear

usage. The 26 to 35 years and 36 to 45 years groups represented 25.0% and 15.0% respectively, while older age groups constituted a smaller portion. In terms of activity types, walking (29.3%) and running (24.3%) were the most common, followed by cricket (24.3%) and gym workouts (22.1%). Notably, the frequency of sportswear usage was high, with 114 respondents (81.4%) using it daily. This high daily usage highlights the functional importance of comfort and thermal performance in sportswear. Less frequent users included those wearing it 1–2 times per week (14.3%), and a minimal number used it occasionally or 3–5 times a week (2.1% each), suggesting a predominantly active and consistent user base among the respondents.

Consumer experiences with fabric properties and performance in sportswear applications

To address the stated objectives, data pertaining to fabric-related experiences in sportswear were collected from a sample of 140 respondents. The analyzed responses are summarized and presented in the table below.

The effectiveness of sportswear in wicking moisture			
	Observed N	Expected N	Residual
Poorly, it stays wet	28	46.7	-18.7
Somewhat, but still feels damp	20	46.7	-26.7
Dries quickly and stays comfortable	92	46.7	45.3
Total	140		

The chi-square test for the effectiveness of sportswear in wicking sweat away from the skin yields a test statistic of 66.743 with 2 degrees of freedom and a p-value of .000, which is highly significant. A p-value less than 0.05 (in this case, effectively zero) indicates that the observed differences between the responses are not due to chance. This means there is a statistically significant difference in how respondents perceive the sweat-wicking ability of their sportswear. Specifically, a much higher number of respondents (92) reported that their sportswear dries quickly and stays comfortable, compared to those who felt it stays wet (28) or still feels damp (20). The significant p-value confirms that consumers clearly distinguish between the performance levels of sportswear, with a strong preference or satisfaction toward products that offer better moisture management.

The tendency of the fabric to become heavy or clingy as a result of sweat accumulation			
	Observed N	Expected N	Residual
No, it remains light	38	46.7	-8.7
Sometimes	94	46.7	47.3
Yes, significantly	8	46.7	-38.7
Total	140		

The chi-square test result for whether the fabric becomes heavy or clingy due to sweat shows a test statistic of 81.657 with 2 degrees of freedom and a p-value of .000, indicating a highly significant result. Since the p-value is far below the standard significance level of 0.05, it confirms that the differences in responses are statistically significant and not due to random chance.

The majority of respondents (94) reported that the fabric sometimes becomes heavy or clingy, while fewer respondents said it remains light (38), and only a small number (8) felt it becomes significantly heavy. This implies that although sportswear generally performs well, there is a noticeable issue with sweat-induced heaviness or clinginess for many users. Manufacturers may need to consider improvements in fabric technology to enhance moisture dispersion and comfort during high-sweat activities.

The occurrence of excessive sweating or localized discomfort in specific regions—such as the back or underarms			
	Observed N	Expected N	Residual
No, it feels comfortable	25	46.7	-21.7
Sometimes	42	46.7	-4.7
Yes, a lot	73	46.7	26.3
Total	140		

The chi-square test for the experience of excessive sweating or discomfort in specific areas (such as the back or armpits) reveals a chi-square value of 25.386 with 2 degrees of freedom and a p-value of .000, which is highly statistically significant. This low p-value (less than 0.05) indicates that the variation in responses is not due to chance, suggesting a meaningful pattern in how consumers perceive discomfort during sportswear use.

Specifically, a majority of respondents (73) reported experiencing significant sweating or discomfort, while 42 said they feel it sometimes, and only 25 felt completely comfortable. These results highlight a clear concern among users about thermal discomfort in specific high-sweat zones, suggesting that sportswear brands need to further innovate in localized ventilation, fit, and fabric design to improve user comfort during physical activity.

Consumer satisfaction levels related to wearing sportswear in warm/hot and cold climatic conditions

To address the stated objectives, data pertaining to satisfaction levels related to wearing sportswear in varied climatic condition were collected from a sample of 140 respondents. The analyzed responses are summarized and presented in the table below.

The subjective experience of wearing sportswear in warm or hot conditions			
	Observed N	Expected N	Residual
Too hot and sweaty	60	35.0	25.0
Warm but tolerable	52	35.0	17.0
Comfortable and breathable	20	35.0	-15.0
Too cold	8	35.0	-27.0
Total	140		

The chi-square test for how respondents feel wearing sportswear in warm or hot conditions yields a test statistic of 53.371 with 3 degrees of freedom and a p-value of .000, indicating a highly significant result. This means that the variation in how users perceive the comfort of sportswear in hot weather is statistically meaningful and not due to chance.

A large number of participants (60) reported feeling too hot and sweaty, followed by 52 who found it warm but tolerable. Only 20 respondents felt the sportswear was comfortable and breathable, while just 8 reported feeling too cold. These results suggest that existing sportswear often lacks sufficient breathability or heat-regulating properties for warm climates, such as those experienced in many parts of India. This signals a need for manufacturers to prioritize cooling fabrics, mesh ventilation, and lightweight materials in sportswear designed for hot weather use.

How do you feel wearing the sportswear in cold conditions?			
	Observed N	Expected N	Residual
Too cold and uncomfortable	19	35.0	-16.0
Slightly cold but tolerable	31	35.0	-4.0
Comfortable and warm	63	35.0	28.0
Too hot	27	35.0	-8.0
Total	140		

The chi-square test for how respondents feel while wearing sportswear in cold conditions shows a test statistic of 32.000 with 3 degrees of freedom and a p-value of .000, indicating a statistically significant difference in responses. This means that the distribution of perceptions is not due to chance, and there are real differences in how consumers experience thermal comfort in colder environments.

The highest number of respondents (63) felt comfortable and warm, which is a positive indicator for the performance of many sportswear products in cold weather. However, 31 reported feeling slightly cold but tolerable, and 19 experienced it as too cold and uncomfortable, while 27 even felt too hot, pointing to a wide range of user experiences. These findings suggest that while many sportswear items successfully provide warmth, there is still room for improvement in temperature regulation to suit varying sensitivity levels and activity types. Customization or layering options could enhance adaptability for users in colder climates.

Consumer perceptions of thermal comfort offered by sportswear across varying temperature environments

To address the stated objectives, data pertaining to perceptions of thermal comfort offered by sportswear across varying temperature environments were collected from a sample of 140 respondents. The analyzed responses are summarized and presented in the table below.

The level of satisfaction experienced with the overall thermal comfort of the sportswear			
	Observed N	Expected N	Residual
Very dissatisfied	15	28.0	-13.0
Somewhat dissatisfied	41	28.0	13.0
Neutral	40	28.0	12.0
Somewhat satisfied	41	28.0	13.0
Very satisfied	3	28.0	-25.0
Total	140		

The chi-square test for satisfaction with the overall thermal comfort of sportswear reveals a chi-square statistic of 45.571 with 4 degrees of freedom and a p-value of .000, indicating a statistically significant difference among responses. This means that the levels of satisfaction reported are not evenly distributed and reflect real variations in user experience.

A relatively large number of respondents were somewhat dissatisfied (41) and neutral (40), indicating ambivalence or mild discomfort regarding thermal performance. Only 3 respondents reported being very satisfied, which is notably low, suggesting that most users do not find their sportswear optimally comfortable across temperature conditions. On the other hand, 15 were very dissatisfied, showing that for a portion of consumers, thermal discomfort is a serious issue. These results highlight a critical area for improvement: most sportswear appears to fall short of expectations when it comes to maintaining comfort in varying thermal environments. Manufacturers should consider innovating with more adaptive, breathable, and thermoregulating materials to enhance user satisfaction.

V. CONCLUSION

This study highlights that while sportswear available in urban and semiurban regions of Mumbai demonstrates effective moisture-wicking capabilities, it exhibits inconsistent thermal comfort across varying climatic conditions. Users frequently reported sensations of heaviness or clinginess induced by perspiration, particularly under warm weather conditions, resulting in moderate overall satisfaction. In colder environments, thermal performance was comparatively more favorable, though not without limitations. These statistically significant outcomes underscore a pronounced disparity between consumer expectations and actual product performance, thereby reinforcing the imperative for apparel manufacturers to prioritize the development of innovative, climate-responsive, and breathable textile technologies to improve wearability and user satisfaction.

BIBLIOGRAPHY

[1] Atalie, D., Tesinova, P., Tadesse, M. G., Ferede, E., Dulgheriu, I., & Loghin, E. (2021). Thermo-physiological comfort properties of sportswear with different combination of inner and outer layers. Materials, 14(22), 6863. https://doi.org/10.3390/ma14226863

[2] Bhardwaj, P., Kumar, A., & Kumar, S. (2022). Linkages between brand experience, shopping styles and purchase decision involvement: A study of Indian apparel consumers. International Journal of Consumer Studies, 46(1), 3–16. https://doi.org/10.1111/ijcs.12684

[3] Bisen, A., & Nuangjamnong, C. (2021). An influence of advertising on consumer-based brand loyalty: A case study on a sports shoe brand in Bhopal India. AU-GSB E-Journal, 14(1), 26–36. https://doi.org/10.14456/augsbejr.2021.3

[4] Gupta, A., Malhotra, G., & Dharwal, M. (2013). Dimensions affecting consumer behavior for athletic wear foreign brands in India. International Journal of Marketing and Technology, 3(8), 26–46.

[5] India Business of Fashion. (2023). Research: The Indian sportswear market – Where fashion meets function. Images Business of Fashion.

[6] India Retailing Bureau. (2023, July 16). The landscape and future of the Indian sportswear market. India Retailing.

[7] Jayasingh, S., Girija, N., & Arunkumar, A. (2022). Determinants of omnichannel shopping intention for sporting goods: A study from the Indian market. Sustainability, 14(21), 14452. https://doi.org/10.3390/su142114452

[8] Kuhm, A., & Azi, B. (2020). The drivers of sustainable apparel and sportswear consumption: A segmented Kano perspective. Sustainability, 12(7).

[9] Loureiro, S. M. C., Rodrigues, Á., & Martins, C. (2023). Love power: From identification to advocacy in fashion sportswear in the social media context. Journal of Brand Management.

[10] Manivel, S., & Mohanalakshmi, B. (2025). Review article on customers' satisfaction towards sports wears. Journal of Management and Entrepreneurship, 17(1), 33–40.

[11] Manna, Y. (2019). Examining consumer-purchasing behavior towards valuable sportswear brands. International Journal of Innovative Technology and Exploring Engineering, 8(10), 3044–3050.

[12] Preetika, R., Subiksa, S., Divesh, S., & Dhurai, B. (2024). Development of sports textiles with enhanced comfort properties for thermal and moisture transport. International Journal of Research Publication and Reviews, 5(3), 4298–4309. Available PDF

[13] Sankar, R., & Rishikesh, S. (2020). Innovative consumer behaviour towards sportswear. International Journal of Management (IJM), 11(12), 1579–1587.

[14] Sharma, M., & Jain, P. (2019). CSR, trust, brand loyalty and brand equity: Empirical evidence from sportswear industry in NCR. Indian Journal of Marketing, 49(5), 29–42. https://doi.org/10.17010/ijom/2019/v49/i5/142203

[15] Sharma, R., & Jain, V. (2019). CSR, trust, brand loyalty and brand equity: Empirical evidences from sportswear industry in the NCR region of India. Indian Journal of Marketing, 49(5), 29–42. https://doi.org/10.1177/0972622519853158

[16] Singhvi, V., & Srivastava, A. (2019). Assessment of consumer perception for selecting sports brands through text mining and netnography. IUP Journal of Brand Management, 16(1), 33–48.

[17] Tesinova, P., & Atalie, D. (2022). Thermal comfort properties of sport fabrics with dependency on structure parameters and maintenance. Fibers and Polymers, 23, 1150–1160. https://doi.org/10.1007/s12221-022-4160-x

[18] Ziemele, I., Manshahia, K., & Das, S. (2018). A comparative study on comfort properties of global & domestic sportswear. International Journal of Engineering Research & Technology (IJERT).