

A NOVEL APPROACH TOWARDS DESIGN AND DEVELOPMENT OF INDIAN MEN'S WORK PLACE CASUAL FOOTWEAR WITH SPECIFIC REFERENCE TO SIZING

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Abstract: *From the stand point of the fitter, footwear size consists primarily of two measurements: overall length and ball width. These measurements however do not indicate the true size of the foot or the footwear. Heel width, waist girth, instep, heel to ball, arch length etc also come in "sizes". The footwear is presumably "sized" in its various sections to match the corresponding sections of the foot. The shoe, the last (a solid 3D mould around which a shoe is made) and the foot are closely related. .*

Thus the primary objective of the research is to improve the satisfaction level of Indian men while wearing work place casual footwear. In order to achieve this demographic and morphological characteristics of subjects would be collected. Morphological characteristics – angle, length, girth etc., would be collected using SATRA foot measurement system, with an adequate sample size. This would lead to categorisation of the population into coherent groups and recommendation of ball girth and width increments etc for Indian population.

Keywords: *Indian men's work place casual footwear, size, fit, last, anthropometric measurements.*

1. Introduction

The Indian footwear market can be bifurcated into men, women and kids footwear segments. Men's footwear occupies the maximum share in the Indian footwear market. The footwear industry in India is fragmented into casual footwear, mass footwear, premium and sports footwear. Mass footwear usually refers to low price footwear and majorly consists of slippers. On the other hand, casual footwear involves those preferred by people for daily wear in schools, colleges or workplace etc [1]. The common styles of men's work place casual footwear are moccasin, boot, derby, brogue and sneaker. [2] People consider comfort as the primary important factor, while purchasing footwear. Men consider quality as the second important factor. [1]

New Delhi, the capital of India, sprawled over the west bank of the river Yamuna is one of the fastest growing cities in India. It is surrounded on three sides by Haryana and to the east, across the river Yamuna by Uttar Pradesh. As per 2011 census the population of National Capital Territory (NCT) is 1,67,53,235 out of which the male population is 89,78,154 and female population is 77,75,081.

The various work places, with reference to the National Capital Territory (NCT), as per Delhi Economic Survey are post offices, banks, nationalized banks, educational institutions, hospitals, metro, restaurants, factories, hotels, media, government offices, corporate etc [3]. The user is men either of middle or top management level for whom there is usually no specified uniform, even though a dress code might exist.

Footwear sizes are one of the most complicated and erratic areas of the whole footwear fitting process. And no matter the experience of the fitter, footwear sizes are one of the least understood, or the most misunderstood, elements in footwear fitting. While size is obviously important, we tend to over - magnify its importance by the assumption that if the footwear is the right size it will automatically deliver the proper fit. This of course is quite untrue. From the stand point of the fitter, footwear size consists primarily of two measurements: overall length and ball width. These measurements however do not indicate the true size of the foot or the footwear. Heel width, waist girth, instep, heel to ball, arch length also come in "sizes". The footwear is presumably "sized" in its various sections to match the corresponding sections of the foot. At least that's the way it is supposed to be. But often it doesn't happen that way. [4].

Due to the lack of Indian sizing surveys, footwear manufacturers are forced to use the size charts of other countries where the anthropometric make of the population is very different from that of India. This results in manufacturing of a product which might not fit the Indian feet types. A research proposal has been submitted wherein, identified anthropometric measurements of feet of Indian office going men would be measured,

computed and based on analysis of the results, requirement of unique lasts for different ethnic groups in the population would be ascertained. [5]

The research aims to ascertain problems related to men's footwear, with specific reference to sizing, in the Indian retail market.

2. Experimental

Experts in the field were consulted through a semi structured interview schedule to

1. validate the existence of the problem of footwear sizing for Indian men's work place casual footwear in the NCT/ NCR region
2. understand methodology of fit and field trials
3. ascertain availability of infrastructure, facilities and other resources with respect to anthropometric survey of feet in NCT/ NCR, last assessment and design in NCT/ NCR regions, development of customized shoes in NCT/ NCR regions and footwear comfort testing, insole pressure measurement etc

Further primary and secondary data has been collected for a pilot study to ascertain problems related to men's footwear, in Indian retail market. The total sample size of 71 respondents was drawn from a variety of consumer groups who have diverse demographic backgrounds and societal lifestyles. The area of the study was primarily National Capital Region (NCR)

Further it is planned to collect identified anthropometric dimensions of feet of Indian men, with an adequate sample size following SATRA foot measurement system.

All dimensions are to be measured according to Shoe & Allied Trades Research Association (SATRA), Kettering, U. K., foot measuring system for both the right and left feet. Morphological characteristics would include thirty one anthropometric dimensions of feet of Indian men, which would in turn include four angle measurements, ten length measurements, ten girth measurements, four height measurements and three width measurements. [6]

3. Results & discussion

2.1. Semi structured interviews of experts in the field were conducted and the following are the outcome of the research conducted so far.

According to Debasish Das Gupta (Interview, August 28, 2017) faced with problems of non - standard size grading etc., India is not able to compete with China in non leather shoes. Due to lack of awareness the Indian consumer emphasises more on looks rather than technical aspects and sizing of footwear. In house product development of lasts is lacking in India. According to Ms. Satyam Srivasatava, Senior Consultant (Footwear Technology), Footwear Design & Development Institute (FDDI), Noida (Interview, August 30, 2017) testing facilities for SATRA Footwear Comfort Index etc., is not available in India.

According to Mr. Shравan Kumar Singh, General Manager – Product Development, Mmojah, Sonipat, Haryana (Interview, October 10, 2017), in the current scenario, emphasis is more on look rather than on sizing. Russia uses Mondopoint sizing system. Bata did a foot survey around 50 to 70 years back. But due to feasibility issues did not use the data and continued with the European sizing system. There is a lot of difference between the feet of the urban population in comparison to the rural one. Width increment is 1/3 rd each ball girth increment. Indicative fitting is used by the manufacturer and wholesaler and real fitting is for the consumer. G - Wide and H - Very Wide fittings are mostly used in India. There are three stages for ensuring the correct fit before the bulk production starts, by the manufacturer.

1. Last
2. Fit test - done in a lab
3. Fit wear test - an employee of the matching size is made to wear the footwear and Quality Control inspection is done after 15, 30 and 45 days. A set of questions are asked to the employee as per a prescribed format.

There is an average of 15 mm gap at the toe portion between the feet and the shoe. Only 1% complaints received from footwear consumers during after sales service are genuine in India.

Mr. Kripal Singh, Top Lasts, Noida (Interview, December 07, 2017) explained the principles of last making.

Each last manufacturing company follows its own single colour for last, because changing colour is difficult. Top lasts uses RECAD – a Poland based software.

2.2. The primary data for the study was also collected from a random sample using a questionnaire. The respondents of various age groups, income levels, occupations were asked for their consumption pattern.

Table 1: Demographic Profile

| Category | Respondents | Percentage |
|-------------------------|--------------------|-------------------|
| Age (years) | | |
| 21 - 30 | 19 | 27% |
| 31 - 40 | 08 | 11% |
| 41 - 50 | 21 | 30% |
| 51 – 60 | 20 | 28% |
| 61 - 70 | 02 | 03% |
| 71 - 80 | 00 | 00% |
| 81 – 90 | 01 | 01% |
| Monthly Income | Respondents | Percentage |
| 15,000 – 50,000 | 26 | 36% |
| 50,000 – 1,00,000 | 15 | 21% |
| 1,00,000 – 1,50,000 | 05 | 07% |
| 1,50,000 – 2,00,000 | 07 | 10% |
| 2,00,000 – 2,50,000 | 04 | 06% |
| >2,50,000 | 14 | 20% |
| Workplace | Respondents | Percentage |
| Bank | 05 | 07% |
| Corporate office | 09 | 13% |
| Educational institution | 10 | 14% |
| Factory | 05 | 07% |
| Government office | 16 | 23% |
| Hotel | 01 | 01% |
| Hospital | 05 | 07% |
| Media | 03 | 04% |
| Restaurant | 01 | 01% |
| Others | 16 | 23% |
| Ethnic group | Respondents | Percentage |
| Purvanchali | 10 | 14% |
| UP | 12 | 17% |
| Uttaranchal | 01 | 01% |
| Haryana | 11 | 16% |
| Bihar | 08 | 11% |
| Jharkhand | 03 | 04% |
| Rajasthan | 02 | 03% |
| Punjab | 16 | 23% |
| West Bengal | 02 | 03% |
| Madhya Pradesh | 01 | 01% |
| Other states | 05 | 07% |

- 42% respondents reported to have a foot injury/ illness. The occurrence of foot injuries in descending order is heel pain followed by heel spur, Achilles tendonitis, arch pain, bunion, callus, claw toe and Morton's neuroma.
- The respondents' preference of style of men's workplace casual footwear in descending order is Derby followed by boot, sneakers, brogue and moccasin. On an average each respondent possessed 5 pairs of footwear at any given point of time. Maximum number of respondents used leather footwear. The respondents' preference of brands for men's workplace casual footwear in descending order is Woodlands followed by Bata, Lacoste, Liberty, Action, Lee Cooper and HRX.
- The preferred mode of purchase of footwear in descending order is through retail outlets followed by online, through factory outlets. 39% respondents availed of after sales service for their workplace casual footwear. The maximum complaints in workplace casual footwear in the descending order was on account of sole cracking/ breaking followed by sizing, manufacturing defects, workmanship and colour fading of trims.

- The usage of sizing system in descending order is British followed by American, Europoint and French. Only 9% of respondents used width fittings. 25% of respondents faced problems with available sizes/ sizing in workplace casual footwear.

4. Conclusion

Thus the study concludes that there is not much emphasis laid on the aspect of footwear sizing system in the context of Indian men's workplace casual footwear. There is a need for Indian footwear sizing survey which would include anthropometric survey of the feet and leg of Indian men's population. Capacity building in product development of footwear lasts would in a great way lead to use of more comfortable footwear by Indian office going men. India's dependence on foreign players for quality footwear would also be reduced. Though there are lot of factors and costs involved in following a better and foolproof footwear sizing system, a beginning has to be made which would lead to lot of technological advancements in the area.

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