

Original Article

The General Awareness of Adaptive Fashion Among People in India, the UAE, France, the US, and the UK

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Abstract - This research paper investigates the general awareness of adaptive fashion among people of determination (PoDs) and its implications for inclusivity within the fashion industry. The study aims to understand the level of awareness among 202 respondents and its impact on fashion retailers and designers across 17 countries - the most coming from India, the UAE, France, the US, and the UK. Through a convenience and snowballing sampling methodology, a diverse group of individuals was examined, encompassing various age groups and backgrounds. The findings reveal a significant lack of awareness about adaptive fashion, with 66.3% of respondents being unfamiliar with the concept. This highlights the pressing need for increased promotion and education in the field. The study has two main implications: firstly, it emphasizes the urgency for the fashion industry to prioritize inclusivity by adapting to the unique clothing needs of PoDs, and secondly, it underscores the potential market opportunity in the adaptive apparel sector, estimated at \$400 billion. By raising awareness and understanding, this research aims to inspire more retailers and designers to create adaptive fashion lines, expanding options and improving accessibility for PoDs while ameliorating from economic and social benefits of tapping into this market.

Keywords - Accessibility, Adaptive fashion, Awareness, Inclusivity, People of Determination (PoDs).

1. Introduction

Fashion. It shapes everyday life. When one chooses what to wear, they contribute to this ever-evolving expression of individuality and cultural identity. Evidence suggests that more than 100,000 years ago, Neanderthals in present-day Europe were tanning animal skins for clothing to protect themselves from the icy world they lived in (Sykes). Were these primate ancestors, who created clothing purely for survival, responsible for laying the foundation for a \$1.7 trillion industry (Ariella)?

Now, fast-forwarding thousands of years to modern society, how one dress reflects their culture, socioeconomic status, or affiliations. A 2014 Yale study on the relationship between dressing well and earning theoretical profit revealed that well-dressed individuals in suits garnered an average profit of \$2.1 million in simulated negotiation scenarios (Green). These results imply that today, while they may be subconscious at times, one's clothing choices serve as a means for the expression and judgment of their identity. Thus, fashion remains an essential element in humans' lives despite fulfilling a modernized need and purpose.

In 2022 apparent consumption of apparel worldwide stands at 183.8 billion pieces, over 15 billion pieces above 2021 numbers (Stastica). A further 7.3 per cent increase in the next three years confirms that the two years of a global pandemic only led to greater consumption levels. This upward trend can be identified by analyzing fashion sales and expenditures in a few select regions.

The total apparel consumption expenditure in India is expected to grow to \$180 billion by 2025 (Naqvi). This puts the country below China and the United States as the most attractive worldwide apparel market. With a rapid increase in disposable income, Indians are not afraid to splurge on lavish garments - exported or local. Such can also be seen in the UAE as well, whose luxury goods market is valued at \$3.78 billion, as of 2023, with expected annual growth of 5.2 per cent for the next five years (Mordor Intelligence). This 'shopper's paradise' hosts every foreign and local brand imaginable, catering to wealthy locals, expats, and the 12.82 million annual international tourists (GMI Blogger). Moreover, with a projected revenue increase of \$1.85 billion by 2025 (Stastica), France's apparel market anticipates a prosperous future despite two years of stagnated growth.

The 21st century is home to a wider range of fashion than ever before. From traditional haute couture and ready-to-wear to contemporary fast fashion and sustainable fashion, there seem to be options for every need and budget. Yet beyond the glitz and glamor, a certain consumer base remains left out and disregarded, one that makes up 16 per cent of the world's population.

There are an estimated 1.3 billion people with disabilities worldwide (WHO), or as the UAE puts it, 'people of determination' (PoD for short). A disability is any condition of the body or mind that renders certain activities and interactions more difficult (CDC). Marginalized and seen as inferior, this group has been the victim of social stigma for millennia. Yet, their reception into society has



been twisted from the start. 'The disabled' are referred to as such because the world around them makes them feel that way. Walking up the stairs, reaching for tall aisles, and putting on skinny jeans are tasks that most take for granted, without realizing that PoDs struggle with them daily. A simple ramp, shorter supermarket shelves, or adaptive fashion could solve issues for those that face them without compromising society's overall convenience or comfort. The latter, defined as "clothing and apparel that is suitable for individuals with physical or sensory disabilities who may have difficulty dressing or experience severe discomfort and inconvenience wearing standard clothing" (Alexiou), remains widely unexplored despite such a large market with a disposable income of over \$13 trillion (World Federation of Advertisers).

Instead of the conventional buttons and zippers, adaptive fashion utilizes Velcro and magnets to ensure that the wearer can independently put on and operate the garment at their own ease. For PoDs, this provides them with a matter of dignity that they can do it themselves. However, very few brands exist to cater to this niche market and its needs: Tommy Hilfiger and Nike are the only exceptions, of which most are unaware. Why are major fashion brands missing out on this golden business opportunity? Why are so many people still oblivious to adaptive fashion and its purpose?

These questions beg the knowledge gap of the potential of adaptive fashion, which has not been explored in-depth to date. Disabilities have been around for millennia, yet people remain unaware of adaptive fashion, and fashion brands refuse to adapt to individual needs. This study aims to answer the questions with data from a conducted survey, provide effective solutions, and raise much-needed awareness on adaptive fashion - all in the hopes of bridging the gap at present.

2. Methodology

2.1. Research Aim

The present study aims to understand the level of awareness regarding adaptive fashion among people living in France, the United Arab Emirates, India, the United Kingdom, and the United States of America.

2.2. Research Design

The present research study has an exploratory research design, referring to initial research, which forms the basis of more conclusive research (Business Research Methodology).

2.3. Tools Used

An adaptive fashion awareness survey was formulated. The survey consists of 16 questions. Some of the questions included in the survey are as follows:

- Have you heard of adaptive fashion?

- Which garment do you feel is the hardest to put on for people of determination?
- Which do you feel is/are the most practical solution(s) to making garments 'adaptive'?

2.4. Sample

The sample consists of 202 participants: there is a 1:1.79 ratio of males to females, and ages range from under 15 to above 40. Convenience and snowballing sample was carried out by sharing the survey link with various groups of relatives, friends, and colleagues in 17 countries.

2.5. Informed Consent

Any personal information provided by the participants regarding demographic questions was kept confidential throughout the research process, and their identities remained anonymous.

2.6. Data Collection Procedure

A Google Form was formulated with questions intended to elicit reflection from respondents across the globe. It was circulated through the aforementioned sampling method.

3. Results

Demographics (age, gender, and country of residence) of the 202 respondents can be seen below.

Table 1. Age range of respondents

Age Range	Count	%
< 15	20	9.9
15-19	39	19.3
20-25	3	1.5
26-29	2	1
30-35	12	5.9
36-40	18	8.9
40+	108	53.5

Table 2. Gender of respondents

Gender	Count	%
Male	71	35.1
Female	127	62.9
Other	4	2

Table 3. Country of residence of respondents

Country of Residence	Count	%
France	32	15.8
India	66	32.7
UAE	66	32.7
USA	14	6.9
UK	5	2.5
Other	19	9.4

Graphical representation, seen below, was carried out to analyze the survey results further.

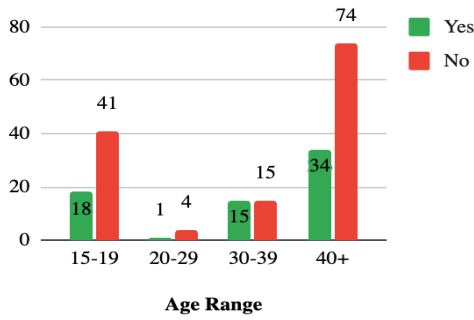


Fig. 1 A "yes" or "no" bar graph comparison between 4 age ranges: "Have you heard of adaptive fashion?" (N = 202)

The results for this question have been separated into two demographics: age ranges, as seen above, and country of residence, as seen in Figure 2. One can see that "no" exceeds "yes" in all but one age range - '30-39', where the two are equal. Since the four age ranges received an unequal distribution of responses, the most populous groups, '15-19' and '40+', can be examined to identify similar trends. 69.5% and 68.5% answered "no", respectively, while 30.5% and 31.4% answered "yes". One sees a common trend: an approximate 70-30 split between not knowing and knowing of adaptive fashion.

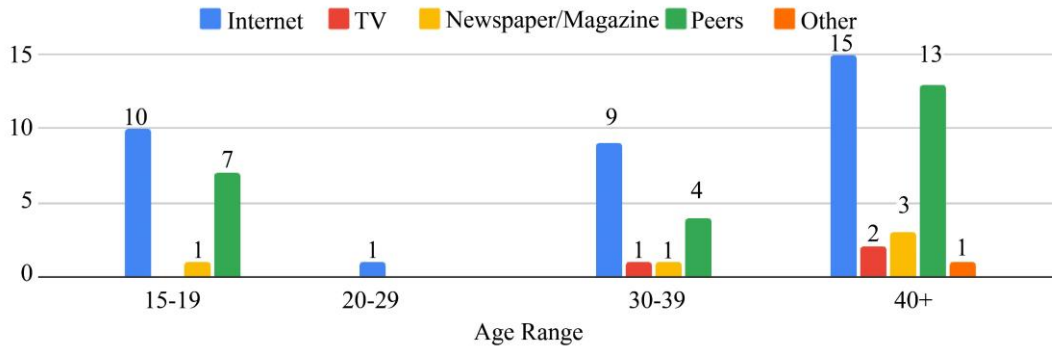


Fig. 2 A 5-option bar graph comparison between 4 age ranges: "Where did you hear about adaptive fashion?" (N = 68)

The above options were provided to those who answered "yes" to the previous question. The Internet taught 53.2% of respondents - in the three most populous age groups - about adaptive fashion. Considering the digital nature of this survey, all respondents had access to the Internet, yet only half had heard about the subject matter from it. This alarming statistic typifies the lack of promotion and awareness surrounding adaptive fashion.

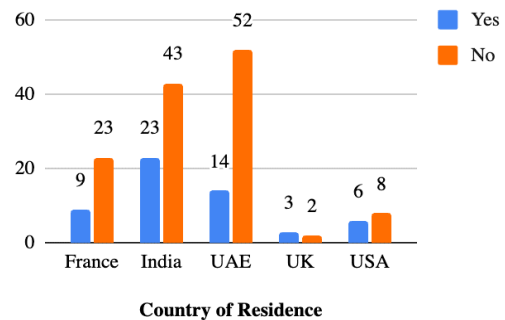


Fig. 4 A "yes" or "no" bar graph comparison between 5 countries of residence: "Is the 'above' considered by the fashion industry for PoDs?" (N = 183)

After responding to questions about their own clothing preferences, respondents were asked to ponder whether the fashion industry considers the same for PoDs and their individual needs. In all but one country, answers for "no" were a majority - averaging to 68.3% of respondents. Therefore, most believe that comfort and style, garment closures, customer satisfaction, and personalization are not treated in the same light for this community and its clothing needs.

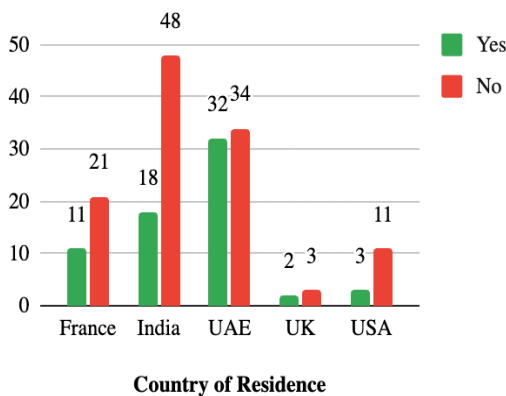


Fig. 3 A "yes" or "no" bar graph comparison between 5 countries of residence: "Have you heard of adaptive fashion?" (N = 183)

Out of the 17 countries where respondents reside, the above 5 countries demonstrate unanimous results: greater responses for "no" to having heard of adaptive fashion. The higher "yes" responses in the United Arab Emirates can be attributed to its greater awareness and support for the PoDs. In contrast, countries like France, India, and the United States demonstrate greater nescience toward this group, and hence the fashion made for them.

Across the 5 countries above, answers for "yes" to having heard of adaptive fashion brands stand at a mere 4.46% of respondents; while more have heard of the concept as a whole, only 9 knew of brands that pursue it, 5 of which came from the UAE. A comparison between Figure 2 and Figure 5 can be drawn, with this nation demonstrating the greatest acknowledgement of both the concept and brands. Nevertheless, affirmative responses to this question must be much higher to consider a country aware and knowledgeable about adaptive fashion.

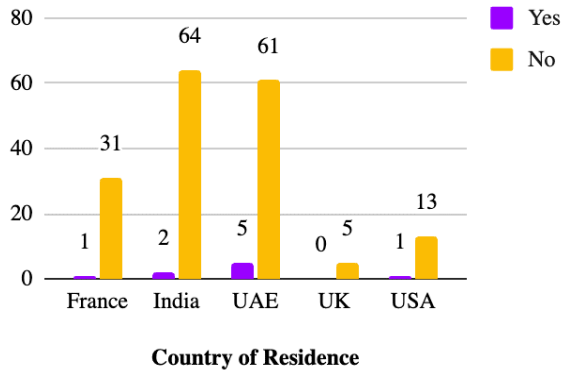


Fig. 5 A "yes" or "no" bar graph comparison between 5 countries of residence: "Have you heard of any adaptive fashion brands?" (N = 183)

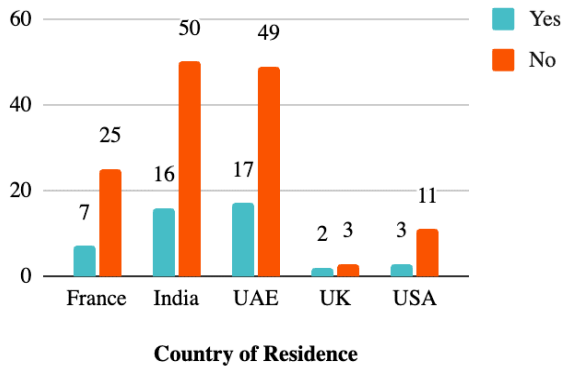


Fig. 6 A "yes" or "no" bar graph comparison between 5 countries of residence: "Have you seen any PoDs in clothing stores?" (N = 183)

Similarly, this question saw an overwhelming number of unfavorable responses, with an average of 73.3% across the 5 countries. This implies the inaccessibility and unfriendly environment of most shopping malls and clothing stores toward PoDs. Shopping is not an easy task for PoDs: not only because of limited clothing options but also due to physical accessibility (i.e. tight aisles, stairs, high shelves, and unaccommodating staff). In conjunction with this first-hand view, Figure 7 illustrates respondents' opinions on convenience levels for PoDs.

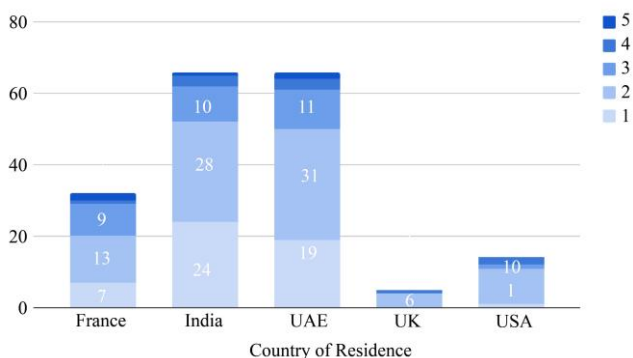


Fig. 7 A 1-5 scale bar graph comparison between 5 countries of residence: "How convenient is In-Person shopping towards PoDs?" (N = 183)

Respondents were asked to ponder on the in-person shopping experience for PoDs and where it stood on a scale of 1-5: '1' being "not at all convenient" (stairs, high racks, cramped trial rooms, indifferent staff) and '5' being "very

convenient" (ramps, accessible racks, spacious access, accommodating staff). 86 respondents settled on '2', signaling a majority of people who believe that the mall experience is largely inconvenient for PoDs. Most of these responses came from the UAE - 36% of individuals - contradicting the aforementioned speculations of this nation being inclusive and considerate.

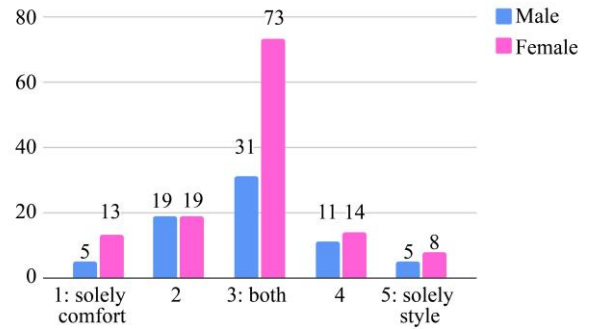


Fig. 8 A 1-5 scale bar graph comparison between genders: "Do you seek comfort or style in your clothing?" (N = 198)

Respondents were also asked to pinpoint their preferences of comfort and/or style on a scale of 1-5, where '1' signifies a total priority for comfort and '5' indicates a total priority for style. While the ratio of male and female respondents was not equal (nearly 1 to 1.79), most prefer a balance between the two factors: they seek comfortable yet stylish clothing. The purpose of this question was to have respondents reflect on their preferences before determining whether the fashion industry considers the same factors for PoDs, as seen above in Figure 4. Fashion permits one with the right to self-expression; ergo, PoDs want the same variety of options as they are no longer willing to accept "scraps from an industry that has been very slow to embrace [them] and [their] needs" (Brown).

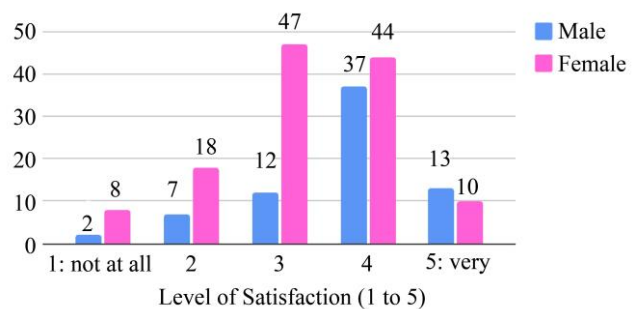


Fig. 9 A 1-5 scale bar graph comparison between genders: "How satisfied are you with clothing options in the market for yourself?" (N = 198)

Another personal question asked respondents to rate their satisfaction with the available clothing options for themselves. In a comparison between genders, most females selected '3' while most males displayed greater satisfaction by selecting '4'. This shows how even between standard clothing lines for men and women, there exists a disparity between the respective satisfaction levels. As with Figure 8, this question also aims to evoke thought and critique on the limited fashion for PoDs, while this research intends to highlight the ease with which adaptive solutions can be implemented to cater to the masses.

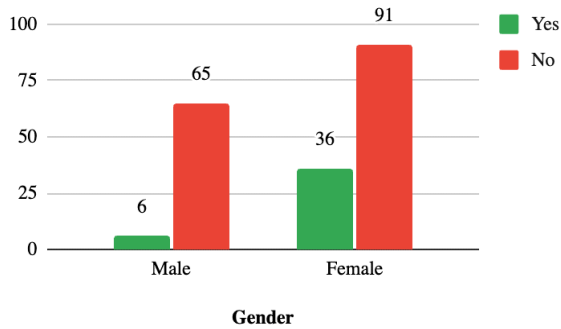


Fig. 10 A "yes" or "no" bar graph comparison between genders: "Do you find difficulty in Putting-On any garments independently?" (N = 198)

Corroborating the statistics seen above regarding greater dissatisfaction with clothing options by females, Figure 10 reveals a staggering 28.3% of said respondents finding difficulty in putting on certain garments independently; this is compared to the meager 8.5% of male respondents. It is clear that women's clothing is restrictive, unwieldy, and not entirely unappealing to many. These results put into perspective the struggles faced by PoDs, who, in most cases, undergo greater struggles in dressing independently. If women with 'conventional' mobility undergo obstacles with basic items, such as button-down shirts and tight jeans, imagine the difficulty for a PoD to put on the same garment.

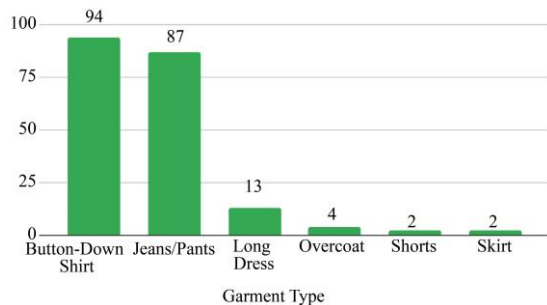


Fig. 11 A 6-option, multi-select bar graph comparison of inconvenient garments for PoDs: "What garment is the hardest to Put-On for PoDs?"

The two garments that respondents found the most difficult to put on - button-down shirts and jeans/pants - were the two that received the most answers for those which are most inconvenient for PoDs, too.

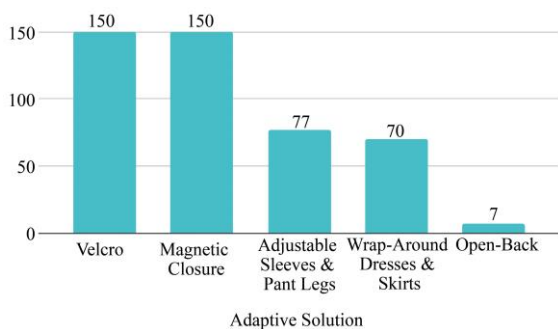


Fig. 12 A 5-option, multi-select bar graph comparison of different adaptive solutions: "Which is the most practical solution to making garments 'Adaptive'?"

Both Velcro and magnetic closure received a tie of 150 votes for the most practical adaptive solution. By proposing these simple options for respondents to select, the survey presents the seemingly-apparent reality of adaptive fashion to 66.3% of participants who claimed earlier to have never heard of it altogether.

4. Discussion

The results indicate several key findings, which can be supported by existing literature.

Primarily, there is a general lack of awareness about adaptive fashion among respondents, with the majority completely unfamiliar with it. By bridging the awareness gap on the benefits of adaptive fashion, demand for such clothing will increase, encouraging more retailers and designers to create such lines. This will, in turn, expand options for PoDs and make it easier for them to find clothing that meets their individual functional and aesthetic needs (Sharma and Mand). While the UAE demonstrated the highest awareness levels, with 48% of respondents knowing of adaptive fashion, there is a long way to go to ensure that this "\$400 billion adaptive apparel market" opportunity attains its due recognition and popularity (Kaufman).

The survey also demonstrates how respondents believe that the fashion industry does not adequately consider the clothing needs of PoDs, indicating a gap in inclusivity. Sinéad Burke, a prominent disability activist from Ireland, corroborates this by calling out the industry: "You think you just know what disabled people need or want, instead of asking us" (Green). While PoD representation on runways and campaigns has increased, and respondents could name 11 adaptive fashion brands, this community lacks an equally-inclusive shopping environment. As part of a Twitter survey conducted by journalist Frances Ryan, users pointed out that "changing rooms typically are too small for two people to fit comfortably inside" with "no bars to hold onto" and no seated area (Elizabeth). The physical environment and staff attitude - either too helpful or completely ignorant - are major hindrances for these people. Thus, just as clothing needs to be adaptive, so does the experience in which it is bought.

Additionally, respondents demonstrated recognition that in-person shopping is not at all convenient for PoDs by indicating that they do not see them regularly in clothing stores and by rating in-person shopping a 2 out of 5 on accessibility. Nevertheless, countries like the UAE have implemented legislation to "empower and promote the social inclusion of all": these include federal laws that protect "the rights of people of determination and guarantees them the right to live with dignity" (UAE). Despite this, why have other countries not taken action, and why is in-person shopping still unfavorable for most PoDs? Public awareness of the difficulties this community faces in carrying out simple tasks is vital for this legislation to manifest a social movement toward change.

Furthermore, respondents expressed a preference for clothing that balances comfort and style. But with such little variety of adaptive fashion, this balance is simply not an option for PoDs. Brands like Kekalove Adaptive Fashion operate with the purpose of addressing the difficulties in "finding clothes that are stylish, but also comfortable, and that they can put on themselves" (Meydan. tv).

Finally, button-down shirts and jeans/pants were identified as the most inconvenient garments. As revealed by a 1977 thesis, several studies with PoDs conducted in the '70s elucidate how routine tasks of buttoning shirts or putting on tight jeans are "major obstacles in the dressing process for the physically disabled person" (Brown). The same thesis stated that "Clothing for the physically disabled should not set them apart from society; instead, efforts should be made to help the individual to conform to society in as many ways as possible", emphasizing the importance of functionality as well as style to allow PoDs to express themselves in the same way as others do with what they wear and how they present themselves. Just as the above results show respondents voting on Velcro and magnetic closures as the most practical adaptive solutions, Brown's thesis also cites research conducted on Velcro in place of buttons enabling "men and women to dress themselves more easily". A solution was as simple as this closure, which renders the task of doing up a shirt easier for everyone (not just PoDs), is overlooked by major brands for no apparent reason.

Therefore, these findings collectively emphasize the urgency for increased awareness, inclusivity, and accessible design in the fashion industry to empower PoDs.

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5. Conclusion

The findings of this study highlight the general lack of awareness about adaptive fashion among respondents, indicating the need for promotion in this area. It reveals the gap in inclusivity within the fashion industry, where the clothing needs of people with disabilities are often overlooked, and hence the knowledge gap amongst society on the same. The results underscore the importance of creating a plethora of clothing options for PoDs and establishing an inclusive shopping environment that considers the physical challenges these individuals face. With increased public awareness of accessible design, PoDs can experience the same sense of empowerment one gets from wearing their treasured "power suit". Although the study is limited by its convenience sampling strategy and uneven balance of demographics, it serves as a stepping stone for further research to explore effective strategies for promoting adaptive fashion, the impact of inclusive design on self-perception and empowerment, and the perspectives of retailers and designers in implementing inclusive practices (i.e., impact on production costs and profitability for businesses). Overall, this study contributes to understanding the challenges and opportunities in an adaptive fashion, urging the fashion industry to prioritize inclusivity and accessibility to better serve the people of determination.

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