



Exploring the Intimate Apparel Challenges and Consumer Satisfaction among Female and Non-binary Individuals with Disabilities

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Introduction. The domestic lingerie market (including intimate apparel) is estimated to be worth \$9 billion, with projected growth in 2025 of \$11 billion (Smith, 2022). Intimate apparel is defined as garments that are worn next to the skin under clothing. People with disabilities (PWDs) are the largest minority group in the world. In 2022, about 1.2-1.85 billion people, or 15% of the global population, lived with a disability (Donovan, 2020), which means PWDs are an emerging market larger than the population of China (Donovan, 2020). Adaptive intimate apparel is defined as garments that are worn next to the skin, under clothing, featuring easy-to-use fasteners and closures, allowing for ease of donning, and doffing for PWDs or impairments (author defined). Therefore, due to the significant size of the disability population worldwide and domestically, — the convergence of intimate and adaptive apparel results in an emerging market ripe for growth. However, despite the impact PWDs have on the population and the economy, their apparel needs, specifically their intimate apparel needs and wants, have been ignored in the apparel marketplace until recently (McBee-Black, 2021). Therefore, this study aimed to fill the gap in the literature by exploring whether PWDs are satisfied with the current offering of intimate apparel in the marketplace and what challenges they face when using or wearing intimate apparel.

Literature Review. This research study used the social model theory of disability (Oliver, 2018) to contextualize the approach to the PWD consumer and the findings. The social model

of disability posits that the environment creates barriers preventing full societal participation among PWDs, not disability or impairment (Oliver, 2018). Lamb (2001) was one of the first apparel scholars to posit that apparel researchers, using the social model theory of disability, could frame disability as a social construct, thus allowing apparel researchers to focus on PWDs as a viable consumer market. Lamb (2001) suggested that when disability is framed as a social construct, apparel scholarship can investigate how apparel contributes to the social barriers facing PWDs.

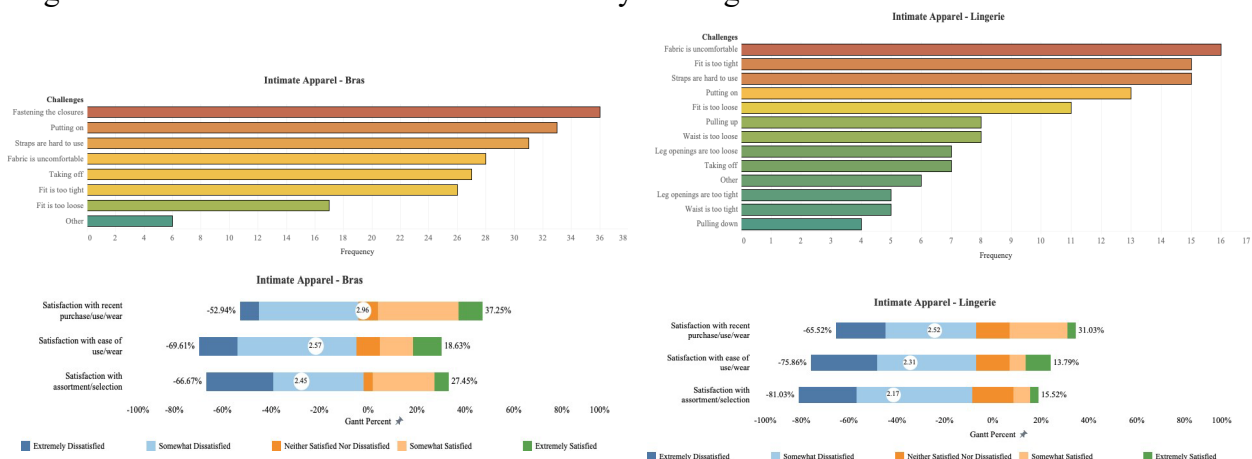
Method. An exploratory study method using secondary survey data was conducted. Babbie (2013) defines three reasons for using exploratory study: (1) to satisfy the researcher's curiosity and desire for better understanding, (2) to test the feasibility of undertaking a more extensive study, and (3) to develop the method to be employed in any subsequent study. Therefore, this study explored whether PWDs are satisfied with the current offering of intimate apparel in the marketplace and what challenges they face when using or wearing it. The dearth of research and the non-existent intimate apparel market targeted to PWDs justifies our exploratory approach.

Secondary Data Details. The survey instrument was a 75-item questionnaire. Measurement items for the consumer's satisfaction/dissatisfaction with intimate apparel were modified using the FEA model of functional, expressive, and aesthetic features (Lamb & Kallal, 1992). Questions related to the ease or difficulty of using or wearing intimate apparel were also based on the FEA Model. Disability factors were categorized using the typology provided by Darling and Heckert (2010a, 2010b). Items on consumer value and perceived attitude towards intimate apparel were adopted from the Material Values Scale (MVS) (Richins & Dawson, 1992), Possession Rating Scale (PRS) (Richin, 1994), and Perceived Value Scale (PERVAL) (Sweeney & Soutar 2001). Perceived comfort (reported Cronbach's $\alpha = .89$) and perceived aesthetic attributes (reported Cronbach's $\alpha = .94$) items were adopted from Hwang, Chung, and Sanders (2016); perceived compatibility (reported Cronbach's $\alpha = .83$) items were

adopted from Ko, Sung, and Yun (2009); perceived ease of use (reported Cronbach's $\alpha = .90$), perceived usefulness (reported Cronbach's $\alpha = .92$) items were adopted from Ahn, Ryu, and Han (2004); and perceived enjoyment (reported Cronbach's $\alpha = .96$) items were adopted from Lang (2018). The survey was deployed to 732 PWDs and their caregivers. Participants were screened to ensure they identified as PWD, female or non-binary, or caregivers of PWDs who identified as female or non-binary. Further, the survey collected demographic information, specific disability information, intimate apparel preferences, satisfaction with intimate apparel purchases, use of intimate apparel, and use of adaptive intimate apparel among PWDs.

Results. The study results show that female and non-binary PWDs lack satisfaction in their intimate apparel due to a failure to address the functional needs of the disability as well as the aesthetic needs of the consumer. Further, the findings suggest that female and non-binary PWDs face significant apparel challenges when using or wearing bras and lingerie. At the same time, underwear is overall less challenging except for the area of comfortable fabrics. The challenge facing most participants in this study was the ease of donning and doffing, using specific types of closures and fasteners such as hooks and snaps. The findings suggest that PWDs are less satisfied with the availability and assortment of bras and lingerie. While underwear provided a higher level of satisfaction among the assortment currently available in the marketplace, an equal number of PWDs consumers were dissatisfied with the assortment of underwear. Finally, while some in the apparel industry continue to suggest that PWDs are unwilling to pay more for items adapted to accommodate their needs, this study found that half of the respondents would be willing to pay more for adaptive apparel if it accommodated their functional needs. Therefore, this study suggests that there is room for growth within the adaptive apparel market, specifically the adaptive intimate apparel market, for apparel brands and retailers to gain market share among PWD consumers. See Figure 1 for data visualization charts explaining the results.

Figure 1. Data Visualization Charts of the Study Findings



Implications and Future Research. Apparel researchers could conduct quantitative and qualitative studies, expanding the breadth and depth among the PWD consumer to uncover additional apparel challenges. By exploring and investigating a larger population of PWDs, apparel researchers can provide data for apparel brands and retailers when considering expanding or entering the emerging adaptive apparel market. Limitations of this research include using secondary data and a small sample size.

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