

Thadikaran, Greeshma Benny; Singh, Sandeep Kumar

Article

Fostering inclusion in digital marketplace: Vistas into the online shopping experiences of consumers with visual impairment in India

Organizations and Markets in Emerging Economies

Provided in Cooperation with:

Vilnius University Press

Suggested Citation: Thadikaran, Greeshma Benny; Singh, Sandeep Kumar (2024) : Fostering inclusion in digital marketplace: Vistas into the online shopping experiences of consumers with visual impairment in India, Organizations and Markets in Emerging Economies, ISSN 2345-0037, Vilnius University Press, Vilnius, Vol. 15, Iss. 1, pp. 90-108,
<https://doi.org/10.15388/omee.2024.15.5>

This Version is available at:

<https://hdl.handle.net/10419/317257>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by/4.0/>

Fostering Inclusion in Digital Marketplace: Vistas into the Online Shopping Experiences of Consumers with Visual Impairment in India

Greeshma Benny Thadikaran (corresponding author)

School of Commerce Finance and Accountancy, CHRIST (Deemed to be University), Bengaluru, India
greeshma.thadikaran@res.christuniversity.in
<https://orcid.org/0000-0001-5234-1630>

Sandeep Kumar Singh

School of Commerce Finance and Accountancy, CHRIST (Deemed to be University), Bengaluru, India
sandeep.kumar@christuniversity.in
<https://orcid.org/0000-0001-7806-0001>

Abstract. Online shopping has become increasingly prevalent in recent years, overshadowing traditional brick-and-mortar shopping. Research has tried to understand the online shopping experiences of various consumers. However, the online shopping experiences of consumers with visual impairment (CWV) gained less attention. This study captures the online shopping experiences of CWV by employing a phe-nomenological qualitative approach. Data was collected from CWV through semi-structured interviews. The sample size of this study was fifteen, and data was analyzed using NVivo14. The findings indicate a growing preference for online shopping among the CWV. The results explore the accessibility-related issues encountered by CWV and strategies employed to overcome them. Additionally, the paper underscores the benefits of independence and the impact of online shopping on the personal growth and well-being of CWV. The study provides insights to marketers to foster inclusion in the digital marketplace. This study helps marketers and other stakeholders to understand the online shopping experiences of CWV and ensures consumer well-being and inclusion.

Keywords: online shopping, consumers with visual impairment, shopping experience, accessibility

Received: 25/12/2023. **Accepted:** 18/4/2024

Copyright © 2024 Greeshma Thadikaran, Sandeep Singh. Published by Vilnius University Press. This is an Open Access article distributed under the terms of the Creative Commons Attribution Licence, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

1. Introduction

Shopping has undergone a significant transformation over time with the advent of the Internet and the establishment of e-commerce. Worldwide e-commerce sales in 2022 are estimated to be over 5.7 trillion U.S. dollars (Gelder, 2023). Additionally, the onset of COVID-19 has added fuel to the fire by proliferating consumer preference for online shopping (Al-Hattami, 2021). Over the last decade, online shopping has surged in India due to the immense growth of information and communication technologies (Davis et al., 2021). In 2021, there were approximately 185 million online shoppers across India, and the numbers will likely increase over the years (Minhas, 2022).

As online shopping has gained momentum worldwide, practitioners and scholars have attempted to investigate consumers' online shopping experiences to serve them better. Customer experiences are critical to attain success in electronic retailing (Bleier et al., 2019; Rose et al., 2012). Positive shopping experiences amplify the intention to purchase online (Saha et al., 2023), impact customer satisfaction (Martin et al., 2015), enhance brand loyalty and lead to positive word of mouth (Bilgihan et al., 2014). Further, the ethics of the online retailer can stimulate a positive shopping experience (Mainardes et al., 2023).

Initial research to understand online shopping behavior focused on attitudes toward online shopping and motivations to shop online (Bhatnagar et al., 2000; Kim & Park, 2005; Shim et al., 2001). Recent research has endeavored to understand the online shopping experiences of various consumers like women (Sathya et al., 2023), students (Xiao et al., 2023), young consumers (Tan et al., 2024), senior citizens (Roy et al., 2023) and low-income consumers (Zhang et al., 2023). However, little attention has been paid to the shopping experiences of persons with disabilities (PWD), especially consumers with visual impairment (CWV) (Yu et al., 2015).

Globally, as of 2020, an estimated 43 million people are blind (Burton et al., 2021). India has the highest population of persons with visual impairment globally, with 270 million people having vision impairments, of which 9.2 million are blind (The International Agency for the Prevention of Blindness, 2022). Further, the World Health Organization (2022) indicates that the overall global estimate for disability is steadily rising. With the increase in the number of online shoppers and the increasing rate of disability, it has become vital to comprehend the online shopping experience of CWV. This study aims to understand the online shopping experience of CWV using a qualitative approach.

2. Review of Literature

CWV utilizes computers with screen reading software programs that convert text to speech (Cohen et al., 2020), and the use of smartphones for CWV is facilitated by screen reader applications such as TalkBack for Android phones and VoiceOver for

iPhones (Jain et al., 2021). Although screen readers act as assistive devices (Schaefer, 2003), components such as photos, images, and graphics become complex for assistive devices to scan and comprehend (Kaufman-Scarborough & Childers, 2009). The use of Alt (alternative) text enables screen readers to describe the image, enabling CWV to select the correct products (Cohen et al., 2020).

The ability to procure information to make a purchase decision depends on the accessibility of an online application or website (Schaefer, 2003). Captcha verification, pictures without text descriptions, and missing or improper headings are challenges CWV encounter while shopping online (Inan et al., 2016). Moreover, the inconsistent and image-based layout of websites poses a hurdle for CWV (Jihyuk et al., 2020). Web design that necessitates the usage of a mouse can make information inaccessible to CWV, as they cannot navigate using a mouse (Kaufman-Scarborough & Childers, 2009).

The inaccessibility of online websites or applications significantly hampers the ease of use (Kaufman-Scarborough & Childers, 2009), thereby impacting the independence of CWV (Kangeswaran et al., 2021). Further, inaccessibility leads to discrimination and negative consumer behavior (Cohen et al., 2020). Accessibility issues were encountered while availing banking and financial services due to limited digital solutions for CWV (Goundar & Sathye, 2023). Accessibility-related service failure and anger lead to negative word of mouth and avoidance of the retailer (Cohen et al., 2023).

Online grocery shopping poses a challenge when the products received are not fresh and when the products required are unavailable (Elms & Tinson, 2012). Access to food involves risks to safety, stress, and uncertainty (Schwartz et al., 2023). Further, using unique descriptions and colors to describe a product hampers the online shopping experience (Kaufman-Scarborough & Childers, 2009). Moreover, CWV are more susceptible to cyber-attacks because visual cues are absent or have restrictions (Inan et al., 2016).

Despite the challenges, convenience is the primary motive behind online shopping (Childers & Kaufman-Scarborough, 2009). Online shopping enables CWV to gain product information quickly, and additional details can be acquired through product reviews (Stangl et al., 2018). CWV can overcome transportation and mobility issues by online shopping (Kaufman-Scarborough & Childers, 2009). Online shopping practices of CWV are significantly influenced by the desire to be treated normally (Liu et al., 2019). Online shopping can elevate normalcy as CWV can search and shop for products more independently than shopping in-store (Kaufman-Scarborough & Childers, 2009).

Studies on the online shopping experiences of CWV are scarce. The United States of America, Australia, and the United Kingdom accounted for more than half of the vulnerability studies (Riedel et al., 2021). However, the highest prevalence of vision loss has been reported in South Asia, followed by Southeast Asia (Bourne et al., 2021), indicating a geographical gap in the literature. Existing literature discusses the experiences of CWV as a homogeneous group. Nevertheless, the literature overlooks demographic factors like gender, age, and technological proficiency that could impact the on-

line shopping of CWV. The present literature is deficient in discussing the factors that motivate and demotivate CWV to shop online. Prior research presents the challenges encountered by CWV while shopping online. However, the literature is silent about strategies used by CWV to overcome these challenges.

The present study attempts to fill the lacuna in the existing literature by answering the following research questions: What are the experiences encountered by CWV while shopping online? Do CWV face challenges while shopping online? If so, what are the strategies employed to overcome the challenges? The study attempts to present a holistic view of the online shopping experiences of CWV in India. The scope of this study is limited to convenience goods. Convenience products are goods that consumers purchase frequently or immediately, with minimal effort (Bucklin, 1963). Convenience goods include staple, impulse, and emergency products (Murphy & Enis, 1986). The rationale for focusing on convenience products is that they are required by all, irrespective of demographic differences.

3. Methodology

The methodology section furnishes a comprehensive description of the overall study design, sampling design, and data analysis methods employed in this paper.

3.1 Study Design

A phenomenological approach was used to explore the online shopping experience of CWV. Phenomenology aims to understand participants' lived experiences (Dukes, 1984). Further, phenomenology is an interpretive process in which the researcher interprets participants' lived experiences (Van Manen, 1997). The rationale for using a phenomenological approach is to understand the online shopping experience of CWV. Data was collected from CWV residing in Bengaluru, Karnataka, India. Karnataka is one of the South Indian states with a significant population of visually impaired persons, and Bengaluru is the district with the highest number of visually impaired persons (Office of the Registrar General & Census Commissioner, 2011). The data was collected through semi-structured interviews.

3.2 Sampling Design

A combination of purposive and snowball sampling was used to collect data. Purposive sampling selects participants with specific characteristics or experiences (Campbell et al., 2020). In this study, CWV above 18 years old who had experience shopping online were targeted. After identifying a few participants, we employed snowball sampling, enabling us to reach out to further participants. Snowball sampling is beneficial for locating and engaging persons from a vulnerable population (Naderifar et al., 2017). Moreover, snowball sampling increases the probability that the participants identified

would agree to participate in the study (Sadler et al., 2010). Prior research suggests that snowball sampling received greater participation from PWD than purposive sampling (Valerio et al., 2016). Hence, a combination of both techniques was used. The sample size in this study was 15. The ideal sample size for phenomenological studies ranges from one to ten persons (Smith et al., 2022; Starks & Trinidad, 2007). Informed consent was obtained from the participants before collecting the data. The interviews were conducted according to the convenience of the participants, some through face-to-face interviews and others through electronic interviews using Google Meet. The interviews were audio recorded, and the participant's approval was obtained for audio recording. The interviews lasted for 16 to 37 minutes, with an average of 23 minutes.

3.3 Data Analysis

After the interviews were conducted, the data was transcribed verbatim. Data analysis was performed using NVivo 14 software. The Interpretative Phenomenological Approach (IPA) was used to analyze the data. IPA investigates how participants make sense of their experiences (Smith et al., 2022). Each transcript was thoroughly read and reread to develop fresh thoughts and insights (Hunt & Smith, 2004). Experiential statements were identified from the interviews of each participant and grouped to form personalized experiential themes (PETS). Further, connections were identified throughout the PET to form group experiential themes (GETS) (Smith et al., 2022). To maintain the anonymity of the participants, their names are assigned from P1 to P15. Table 1 shows the demographics of the study participants.

Table 1

Demography of the Participants of the Study

Participant	Gender	Age	Employment Status	Extent of Visual Impairment
P1	Female	25	Student	Blind
P2	Male	31	Employed	Blind
P3	Female	31	Employed	Low Vision
P4	Male	28	Employed	Blind
P5	Female	29	Employed	Blind
P6	Male	31	Employed	Low Vision
P7	Male	47	Employed	Blind
P8	Female	23	Student	Blind
P9	Female	30	Employed	Blind
P10	Male	31	Employed	Blind
P11	Male	27	Employed	Blind
P12	Male	22	Student	Blind
P13	Male	24	Employed	Blind
P14	Female	40	Employed	Blind
P15	Female	21	Student	Blind

4. Results

The results of this study are presented in two sections. The first section of the results deals with the GETs formed from the IPA. The GETs reflect the various shopping experiences encountered by CWV. The second section of the results section portrays the overall trends identified from the data, including the preferences for online shopping among CWV and the effect of gender on preference for online shopping.

4.1 Group Experiential Themes (GETS)

Through the analysis, the researchers have identified four GETs. The analysis of the interviews reveals accessibility as a significant hurdle faced by CWV. Consequently, the first theme focuses on accessibility and the potential of inaccessibility to create a vicious cycle. Subsequently, CWV devised various strategies to surmount the accessibility challenges; the second theme discusses these strategies. The third theme discusses the effects of independence on the online shopping experiences of CWV. Though CWV encounters numerous challenges, online shopping positively impacts personal growth and well-being, forming the subject of the final theme.

4.1.1. Vicious cycle of inaccessibility

Accessibility of online shopping platforms ensures that CWV can navigate the website or application and affects the ease of use. Accessibility-related obstacles are the challenges that CWV face because of the overall design and usability of the application or website. When websites and shopping applications are incompatible with assistive devices like screen readers, CWV experience stress. Further, a significant accessibility-related issue faced by CWV is inaccessible images.

“Many online shopping platforms are not screen reader friendly; this is a major hurdle while shopping online. It causes me a lot of stress and confusion because it becomes difficult to browse for products, and the platform gets stuck many times. I must be patient and try multiple times to complete the process.” (P12)

“Images displayed in the online shopping applications are not accessible. TalkBack, an assistive device that reads the text on the screen, cannot describe the image. TalkBack would read out ‘image’ wherever an image of the product appears on the screen.” (P1)

“Service providers should incorporate Alt text so that the screen readers can provide a description of the product further; without the description of the image, it is difficult to visualize the product in the mind.” (P5)

For any consumer, the images provided by the online shopping platform allow them to make sense of the product due to the absence of the opportunity to touch and feel the products while shopping online. However, for CWV, the lack of image description hinders them from visualizing the product, especially if they are shopping for new prod-

ucts they have not used or consumed before. With the images being inaccessible, the only source to gather information about the products for CWV is through descriptions. However, CWV reports a deficiency in product information on online shopping platforms.

“It is difficult to know the expiry dates and ingredients of the eatable products purchased online as they are normally mentioned in the images, and the images are inaccessible. I only get to know the information mentioned in the description.” (P10)

“There are very few descriptions provided about the product on most platforms. The lack of descriptions is very common in online applications that deliver products instantly.” (P3)

“I wanted to purchase a notebook or diary from an online platform. I was unable to find any information regarding the size of the book. The dimensions were not mentioned. I wanted to know whether the book was big or small. I was not able to understand the size as the image was inaccessible and proper descriptions were not provided.” (P11)

Another major challenge related to accessibility is returning or claiming a refund for damaged products purchased online. Participants report the inaccessibility of customer care or help options in online shopping applications and websites. Most CWV stated that returning or claiming a refund was lengthy and time-consuming. Moreover, they required assistance from someone to complete the process. The participants’ narratives point out the hindrances CWV face due to stringent time constraints imposed on canceling an order after placing the order.

“The option to return or claim a refund for the product is very inaccessible. Sometimes, even if the product is misplaced or damaged, I do not take any action because of the difficult process. I do not prefer to make high-end purchases on online platforms. I will buy whatever is necessary only.” (P2)

“Another thing that I want to draw your attention to is that most instant online shopping applications and websites have a 60-second cancellation policy. That is, after ordering the product, you have only 60 seconds to cancel the product. First of all, the app is inaccessible, and the cancellation deadline is very limited; it becomes annoying and difficult. Further, if you want to return a product, they will normally ask for a photo of the product, which is also difficult if you are alone. It would be good if they had the option of taking a video of the product, which would be easier for a blind person. The consumer redressal system does not happen very easily.” (P4)

“Once, I placed an order for seven items from an instant delivery application, and at the time of delivery, I received some other products. The delivery was misplaced, and I tried to contact customer care through the chat option, but the page was inaccessible. I had to take the assistance of my friend and somehow got the refund.” (P11)

The paramount accessibility-related challenges CWV face include image inaccessibility, lack of proper description, and inaccessibility to customer care options. Acces-

sibility issues hinder online shopping and demotivate CWV to shop online. Accessibility-related issues, therefore, create a vicious cycle that leads to dissatisfaction and demotivation to shop online among CWV.

“The accessibility issues frustrate me. If I purchase a product online and it is not as expected, I cannot return it sometimes because it is a long procedure and accessibility is not good. Accessibility sometimes demotivates me from shopping online.” (P11)

“The lack of proper descriptions coupled with image inaccessibility demotivates me to shop online.” (P3)

“Unlabelled buttons in some of the online shopping applications and accessibility problems sometimes make me think of going to a retail store to shop.” (P9)

4.1.2. Strategies used to overcome the challenges faced

To overcome the accessibility challenges encountered, CWV employs multiple strategies. Some seek technology to gather information about images, whereas others depend on reviews from consumers who have used the product or rely on their memory. The strategies employed depend on the time and comfort of the CWV. As returning and claiming refunds pose challenges for CWV, they opt for the cash delivery option. This considerably reduces the frequency of claiming returns and refunds. Accessibility-related issues encountered by CWV push them to seek assistance and support from others. However, although the strategies employed provide some relief, they may consume much time.

“Since the images are not accessible most of the time, I rely on reviews of the products mentioned by other consumers, which helps me get an idea of the product.” (P10)

“I take a screenshot of the image and use other applications to get descriptions about the product. This process is time-consuming, and it is not possible to do this for all products.” (P11)

“I have to take the assistance of someone else to verify the image and give me a description of the image.” (P8)

“I always try to opt for the cash-on-delivery option. I can make the payment after feeling the product. This reduces the chances of return. If I have to return a product, it is time-consuming and difficult. The cash-on-delivery option makes me feel more controlled.” (P13)

“Another technique that I use is to remember the name of the flavor of the products. For example, Lays potato chips come in different colors like green, blue, red, yellow, and orange. I will remember the name of the flavor associated with each color. So, even if I cannot see the color in the image, based on the name of the flavor mentioned in the description, I shop for them. This mainly works for products like snacks and products with different varieties.” (P3)

Another indirect strategy CWV employs to overcome the challenges faced while shopping online is to shop for brands and products they are familiar with. CWV participants exhibited a preference for known brands and online platforms. They avoided trying out or switching to new brands, products, or online platforms. By sticking to familiar brands and online platforms, CWV felt more controlled and secure. Using new brands and online platforms comes with the risk of not getting the ideal product or facing more challenges.

“I prefer to shop online from popular and well-known brands. I do not like to try out new or small online platforms. If I try out new products or brands, I might not get good products, and I have to return them.” (P1)

“I usually know the brand that I frequently purchase. I prefer to stick to the brand.” (P2)

4.1.3. *Independence acting as a double-edged sword*

Online shopping offers a significant advantage of independence. While shopping in a physical store, CWV would require assistance navigating and locating the products. Such assistance can be eliminated while shopping online. This benefit, in turn, motivates CWV to shop online. This sense of autonomy provided by online shopping fosters feelings of pride and satisfaction.

“Online shopping is the pride of independence. Once, my mother came to stay at my home in the city, I shopped for products online. My mother was very surprised because, in the village, we do not shop for grocery products online, as delivery is also very limited. My mother saw how I was purchasing the products independently, and it was a very happy and proud moment for me.” (P2)

“We can get the products we want independently through online shopping. If we go to a store, we may need to depend on staff to obtain information about the product. Independence is a motivator for shopping online.” (P8)

“Online shopping is very comfortable. I can independently shop for the products required. If I am alone at home, I sometimes find it difficult to go outside if I need certain products. I can shop online, and they will be delivered to my doorstep.” (P14)

Though independence achieved through online shopping seems to be advantageous, this independence comes with a price. Independence, to a large extent, restricts the socialization and communication that would naturally occur while shopping in a retail store. For CWV, shopping is also a means of socializing and connecting with new people. The participant’s narrative portrays the importance of socialization. The independence achieved, therefore, acts as a double-edged sword, creating satisfaction and pride while simultaneously disrupting socialization.

“When there is time, I like to go out and socialize. It enables me to learn new things. Due to this, I prefer to shop in a retail store. I get to meet people and communicate with them. While shopping online, I do not get to socialize or meet new people.” (P5)

“While shopping in a store, you will interact with people, and more emotion is involved. I feel I gain more life experiences when I shop in a store. I can feel the people around me and get a glimpse of their life. Online shopping is more convenient, but there is less interaction and experience.” (P15)

4.1.4. Online shopping aids in personal growth and well-being

Though online shopping poses some challenges for CWV, it provides multiple benefits for CWV. Online shopping can provide CWV with new learning opportunities and experiences, leading to personal growth. Online shopping affects the well-being of CWV. The narrative of P9 explains how the participant provided a helping hand to family members through online shopping. The participant also recalls the importance of online shopping during the COVID-19 pandemic. During the pandemic, the opportunity to shop online was a source of relief for all consumers.

“In my native place where my mother resides now, the market is far. My mother has to travel to a neighboring city to purchase products, and there are no direct bus routes. She has to take two to three buses to reach the market. Now, I can order all the products that my mother needs through online shopping platforms. I can stay in the city and take care of her needs. I feel very happy and satisfied that I can help my mother. Another thing that I recollect is that even during COVID-19, online shopping was a big savior. We could get the products required during the pandemic without much difficulty.” (P9)

Online shopping enables CWV to gain information about various products, especially new products. This provides an opportunity for CWV to explore new products and platforms. This exploration builds curiosity and positively impacts online shopping. The satisfaction derived from online shopping builds confidence and motivates CWV to shop online again.

“Recently, I was searching for a tote bag online. I did not know what a tote bag was. I got to know about a tote bag from my sister. I searched online to get an idea about a tote bag. So, I get information about new products and get an idea of the product through online shopping platforms. I have not yet touched or felt a tote bag, but I know fairly much about it now. This curiosity drives me to shop. I like gathering information about products, especially new products, through online shopping platforms and then going to the store to touch and feel the product.” (P4)

“After shopping online, I feel very happy when the products are good. If the products are good and satisfy my needs, I get confident to shop further from online platforms.” (P1)

Overall CWV encountered a combination of positive and negative experiences while undertaking online shopping. CWV faced challenges as some websites and shopping applications were inaccessible and non-compatible with screen readers and other assistive technologies. However, CWV employed personalized strategies to overcome

some challenges and smoothly undertake online shopping. Online shopping provides the benefit of independence, fostering normalcy and contributing to their well-being.

4.2. *Emerging Trends*

This section probes into the patterns and preferences for online shopping that emerged from the data. An exploration was made to uncover the effect of the demographic factor of gender on the preference for online shopping among CWV.

Table 2

Preference by Participants Towards Various Modes of Shopping

Modes of shopping	Preference by participants
Online Shopping	7
In-store Shopping	3
Mixed Opinions (Both Online & In-store)	5

Table 2 depicts the preference of CWV towards various modes of shopping. The majority of the participants in the study indicated a strong preference to shop online compared to shopping in a store. This indicates a growing preference for online shopping among the CWV. Seven out of fifteen participants preferred to shop online, whereas only three preferred to shop in a retail store, and the remaining five participants had mixed opinions. The participants' mixed opinions about shopping online or in a store stem from their various shopping circumstances. The choice of shopping in a store or online is influenced by the nature of products, availability of time, location, and current circumstances of CWV.

"My preference to shop online or in a store depends on various situations and circumstances. If I have time and the market is nearby, I prefer to shop in a store. Sometimes, I will not find the product I am looking for in the store, so I do online shopping. If I have time and if I can wait for the product, I shop online." (P7)

"Again, it depends on the products. For some products, I prefer to shop in the store. For fresh produce, I prefer to go to the store and purchase them. If I shop in a store for fruits and vegetables, I can feel and touch and inspect the quality. However, for other products, I prefer to shop mostly online." (P11)

"I like to research online and shop in the store if it is a new product or brand. If I need to shop immediately, I prefer to go online. If I have spare time, I want to check out products and touch and feel them, then I prefer to shop in the store. For me, sometimes it is a combination of online and shopping in a store" (P4)

The preference for online shopping stems mainly from its convenience. However, convenience can have multiple meanings for CWV. The data revealed that the convenience of online shopping can be in the form of saving time, less tiring, and home delivery.

“Sometimes I am busy with work, and I do not have the time to go to the store and shop for products. On those busy days, online shopping saves time.” (P10)

“I feel online shopping saves time. I do not need to go to the store, and this enables me to save transportation costs and time. Online shopping is better than spending hours in retail stores and malls. I do not have to walk around the stores to locate the products. I can sit at home and do the shopping. This is why I feel online shopping is less tiring.” (P6)

“We can order products online at any time, be it early morning or late night. This aspect of online shopping is convenient. Hence, I can come back from work and order products.” (P2)

“One of the important benefits of online shopping is that products purchased get delivered to my doorsteps. I do not have to carry heavy groceries home.” (P11)

Table 3
Preference for Various Modes of Shopping Based on Gender

Modes of Shopping	Preference by Male participants	Preference by Female Participants
Online Shopping	4	3
In-Store Shopping	Nil	3
Mixed Opinions (Both online and in-store)	4	1

An exploration of the demographic factor of gender revealed that the online shopping preference of CWV differed by gender. Table 3 depicts the preference for various modes of shopping based on gender. All participants who preferred shopping in stores rather than online shopping were women. Moreover, among the seven participants who preferred online shopping, four were males, and the remaining three were female participants. This indicates that women CWV have a lower preference for shopping online. The literature on CWV has no evidence of gender differences in the preference for online shopping. However, studies on sighted consumers have revealed that men prefer to shop online more than women (Rajamma & Neeley, 2005).

5. Discussion

The study’s findings reveal that online shopping positively impacts the independence of CWV, aligning with the findings of Kaufman-Scarborough and Childers (2009). However, while undertaking online shopping, CWV encounters accessibility challenges, in line with the findings of Kaufman-Scarborough and Childers (2009) and Schaefer (2003). The major accessibility-related obstacles faced by CWV while shopping online are inaccessible images, lack of description, and challenges in returning the product or claiming a refund. The problem of inaccessibility of images was also reported in the studies by Cohen et al. (2020, 2023) and Inan et al. (2016). This study brought out the challenges faced by CWV while returning or claiming refunds from online platforms, which was not reported in the existing literature.

This study reveals that accessibility challenges encountered by CWV demotivate them to undertake online shopping. The conditions of website accessibility must be improved to ensure equality and inclusion for all. The World Wide Web Consortium (W3C) has made efforts to promote the accessibility of websites for disabled web users and authors. The Web Accessibility Initiative (WAI) has created awareness and developed model resources to guide organizations in developing accessible websites (Sloan et al., 2006). The Web Content Accessibility Guidelines (WCAG) developed by the W3C are standards that ensure digital accessibility (World Wide Web Consortium, 2023a). The latest guideline by W3C is Web Content Accessibility Guidelines (WCAG) 2.2, released on 5 October 2023 (World Wide Web Consortium, 2023b).

In India, the Rights of Persons with Disability Act 2016 (RPWD) promotes the acceptance of PWD and ensures their social engagement (Math et al., 2019). Section 40 of the RPWD Act directs the laying down of standards for accessibility for physical environment, transportation, and information and communication technologies. The Guidelines for Indian Government Websites (GIGW 3.0) were developed by the Ministry of Electronics and Information Technology based on the WCAG 2.1 (National Informatics Centre, 2023). However, the scope of GIGW 3.0 is limited to government websites and applications (National Informatics Centre, 2023). The compliance with WCAG is voluntary in India (Narasimhan, 2017). Service providers must consider the WACG guidelines when designing websites and applications. It is crucial to consider the viewpoints of PWD while developing and designing new technologies and actively involving them in the process (Baumgartner et al., 2023). The benefits of higher sales offset the cost of designing an accessible website or application and, in turn, foster inclusion.

The study's findings indicated that CWV encountered difficulty undertaking the return and refund process after shopping online. Service providers must consider ways to simplify after-sales services like returns and refunds, keeping in mind the needs of CWV. The ease of the return and refund process builds confidence in CWV and encourages them to shop online. Moreover, returns, refunds, and product exchanges increase satisfaction and motivate consumers to continue shopping online (Javed & Wu, 2020).

The study reveals a growing preference among CWV to adopt online shopping. However, women customers with visual impairment had a lower preference for online shopping. Future research could employ the Unified Theory of Acceptance and Use of Technology (UTAUT) to quantitatively understand the factors that impact the adoption of online shopping. UTAUT model can predict behavioral intention to adopt technology, considering factors such as risk, trust, cost, and self-efficacy (Al-Saedi et al., 2020). Upcoming studies could investigate the impact of demographics, like age and technological proficiency of CWV, on the preference to adopt online shopping. Understanding the shopping experience of PWD will aid in recognizing the path toward inclusion and equality (Eskytė, 2019). Services become inclusive when the needs

of diverse consumers are met (Hollenbeck & Patrick, 2023). Collective efforts of all stakeholders are needed to ensure inclusion in the digital marketplace.

6. Practical Implications

This study provides insights for improving the online shopping experiences for CWV. The study recommends improving the website's accessibility and online shopping applications to accommodate the diverse needs of all consumers and provide equality. Firstly, service providers must review their existing websites and online shopping applications to ensure they align with the WCAG guidelines to improve accessibility. Further, PWD should be consulted while designing a new website and applications to incorporate their needs. Subsequently, after designing, PWD should test the websites and applications to ensure accessibility.

Instant delivery online service providers must try to incorporate more product descriptions into their websites and shopping applications. Product information such as expiry dates, ingredients used, and nutritional facts must be clearly mentioned in descriptions of products, especially food products. The availability of more information allows CWV to make informed decisions. The challenges faced by CWV claiming refunds for damaged products and initiating returns could be addressed by service providers by incorporating the provision of uploading videos of damaged products to claim refunds. This is particularly beneficial for CWV, as uploading a photograph can be challenging. Streamlining the process of claiming refunds and returns can boost confidence and motivate CWV to shop online.

7. Conclusion

This study portrays the experiences customers with visual impairment (CWV) encounter while shopping online. CWV faced both positive and negative experiences while undertaking online shopping. The negative experiences include the challenges CWV face while shopping online. The significant challenges CWV encounter while shopping online are accessibility issues such as inaccessible images, lack of description, and difficulty returning and claiming refunds. The findings also reveal that accessibility issues demotivate CWV to shop online.

Despite these challenges, CWV employed tailor-made strategies to overcome inaccessibility. Some of the strategies used by CWV include dependence on technology, review of products provided by consumers, or reliance on their memory from past shopping experiences. This study reports a growing preference for online shopping among CWV. The benefits of online shopping in the form of convenience, personal well-being, and independence can be attributed to this growing preference.

Research to understand the shopping experiences of CWV is in the infancy stage. Efforts should be made to further the research domain and cater to the needs of CWV.

With the growing preference for online shopping, it becomes vital to ensure that shopping websites and applications are accessible and user-friendly for CWV. CWV should be considered as mainstream consumers, and efforts should be made to cater to their needs. Marketplaces should strive to provide equal opportunities for all consumers.

Disclosure Statement

This study did not receive any funding. The authors declare that they have no conflicts of interest. Ethical clearance for the study was obtained from the Center for Research, CHRIST (Deemed to be University), Bengaluru, India.

Acknowledgement

The authors express their gratitude to Enable India, a Non-Profit Organization located in Bengaluru, for assisting reaching out to participants. We thank the participants for sharing their valuable insights.

References

- Al-Hattami, H. M. (2021). Determinants of intention to continue usage of online shopping under a pandemic: COVID-19. *Cogent Business and Management*, 8(1), 1–17. <https://doi.org/10.1080/23311975.2021.1936368>
- Al-Saedi, K., Al-Emran, M., Ramayah, T., & Abusham, E. (2020). Developing a general extended UTAUT model for M-payment adoption. *Technology in Society*, 62, 101293. <https://doi.org/10.1016/j.techsoc.2020.101293>
- Baumgartner, A., Rohrbach, T., & Schönhagen, P. (2023). 'If the phone were broken, I'd be screwed': Media use of people with disabilities in the digital era. *Disability & Society*, 38(1), 73–97. <https://doi.org/10.1080/09687599.2021.1916884>
- Bhatnagar, A., Misra, S., & Rao, H. R. (2000). On risk, convenience, and internet shopping behavior. *Communications of the ACM*, 43(11), 98–105. <https://doi.org/10.1145/353360.353371>
- Bilgihan, A., Okumus, F., Nusair, K., & Bujisic, M. (2014). Online experiences: flow theory, measuring online customer experience in e-commerce and managerial implications for the lodging industry. *Information Technology & Tourism*, 14(1), 49–71. <https://doi.org/10.1007/s40558-013-0003-3>
- Bleier, A., Harmeling, C. M., & Palmatier, R. W. (2019). Creating effective online customer experiences. *Journal of Marketing*, 83(2), 98–119. <https://doi.org/10.1177/0022242918809930>
- Bourne, R. R. A., Steinmetz, J. D., Flaxman, S., Briant, P. S., Taylor, H. R., Resnikoff, S., Casson, R. J., Abdoli, A., Abu-Gharbieh, E., Afshin, A., Ahmadi, H., Akalu, Y., Alamneh, A. A., Alemayehu, W., Alfaar, A. S., Alipour, V., Anbesu, E. W., Androudi, S., Arabloo, J., ... Vos, T. (2021). Trends in prevalence of blindness and distance and near vision impairment over 30 years: An analysis for the global burden of disease study. *The Lancet Global Health*, 9(2), e130–e143. [https://doi.org/10.1016/S2214-109X\(20\)30425-3](https://doi.org/10.1016/S2214-109X(20)30425-3)
- Bucklin, L. P. (1963). Retail strategy and the classification of consumer goods. *Journal of Marketing*, 27(1), 50. <https://doi.org/10.2307/1248582>

Burton, M. J., Ramke, J., Marques, A. P., Bourne, R. R. A., Congdon, N., Jones, I., Ah Tong, B. A. M., Arunga, S., Bachani, D., Bascaran, C., Bastawrous, A., Blanchet, K., Braithwaite, T., Buchan, J. C., Cairns, J., Cama, A., Chagunda, M., Chuluunkhuu, C., Cooper, A., ... Faal, H. B. (2021). The Lancet Global Health Commission on Global Eye Health: Vision Beyond 2020. *The Lancet Global Health*, 9(4), e489–e551. [https://doi.org/10.1016/S2214-109X\(20\)30488-5](https://doi.org/10.1016/S2214-109X(20)30488-5)

Campbell, S., Greenwood, M., Prior, S., Shearer, T., Walkem, K., Young, S., Bywaters, D., & Walker, K. (2020). Purposive sampling: complex or simple? Research case examples. *Journal of Research in Nursing*, 25(8), 652–661. <https://doi.org/10.1177/1744987120927206>

Childers, T. L., & Kaufman-Scarborough, C. (2009). Expanding Opportunities for Online Shoppers with Disabilities. *Journal of Business Research*, 62(5), 572–578. <https://doi.org/10.1016/j.jbusres.2008.06.017>

Cohen, A. H., Fresneda, J. E., & Anderson, R. E. (2020). What retailers need to understand about website inaccessibility and disabled consumers: Challenges and opportunities. *Journal of Consumer Affairs*, 54(3), 854–889. <https://doi.org/10.1111/joca.12307>

Cohen, A. H., Fresneda, J. E., & Anderson, R. E. (2023). How inaccessible retail websites affect blind and low vision consumers: Their perceptions and responses. *Journal of Service Theory and Practice*, 33(3), 329–351. <https://doi.org/10.1108/JSTP-08-2021-0167>

Davis, F., Francis Gnanasekar, M. B., & Parayitam, S. (2021). Trust and product as moderators in online shopping behavior: Evidence from India. *South Asian Journal of Marketing*, 2(1), 28–50. <https://doi.org/10.1108/sajm-02-2021-0017>

Dukes, S. (1984). Phenomenological methodology in the human sciences. *Journal of Religion & Health*, 23(3), 197–203. <https://doi.org/10.1007/BF00990785>

Elms, J., & Tinson, J. (2012). Consumer vulnerability and the transformative potential of Internet shopping: An exploratory case study. *Journal of Marketing Management*, 28(11–12), 1354–1376. <https://doi.org/10.1080/0267257X.2012.691526>

Eskytė, I. (2019). Disabled people's vulnerability in the European single market: The case of consumer information. *Journal of Consumer Policy*, 42(4), 521–543. <https://doi.org/10.1007/s10603-019-09422-3>

Gelder, van, K. (2023, September 26). *E-commerce Worldwide - Statistics & Facts*. Statista. <https://www.statista.com/topics/871/online-shopping/#topicOverview>

Goundar, S., & Sathye, M. (2023). Exploring Access to Financial Services by Visually Impaired People. *Journal of Risk and Financial Management*, 16(2), 96. <https://doi.org/10.3390/jrfm16020096>

Hollenbeck, C. R., & Patrick, V. M. (2023). A R.E.C.I.P.E. for Inclusion: A Six-Step Journey to Teaching Inclusive Marketing Orientation. *Marketing Education Review*, 33(2), 142–148. <https://doi.org/10.1080/10528008.2022.2159439>

Hunt, D., & Smith, J. A. (2004). The personal experience of carers of stroke survivors: An interpretative phenomenological analysis. *Disability and Rehabilitation*, 26(16), 1000–1011. <https://doi.org/10.1080/09638280410001702423>

Inan, F. A., Namin, A. S., Pogrund, R. L., Jones, K. S., Inan, F. A., Namin, A. S., Pogrund, R. L., & Jones, K. S. (2016). Internet Use and Cybersecurity Concerns of Individuals with Visual Impairments. *Journal of Educational Technology & Society*, 19(1), 28–40.

Jain, M., Diwakar, N., & Swaminathan, M. (2021). Smartphone Usage by Expert Blind Users. *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*, 1–15. <https://doi.org/10.1145/3411764.3445074>

Javed, M. K., & Wu, M. (2020). Effects of online retailer after delivery services on repurchase intention: An empirical analysis of customers' past experience and future confidence with the retailer. *Journal of Retailing and Consumer Services*, 54, 101942. <https://doi.org/10.1016/j.jretconser.2019.101942>

Jihyuk, P., Yeji, H., & Uran, O. (2020). Understanding smartphone-based online shopping ex-

periences and behaviors of blind users. *International Journal of Advanced Smart Convergence*, 9(3), 260–271. <https://doi.org/https://doi.org/10.7236/IJASC.2020.9.3.260>

Kangeswaran, V., Vasandarai, D., Eliyas, C., Munsil, M. M. M., Kodagoda, N., & Suriyawansa, K. (2021). A bilingual audio based online shopping mobile application for visually impaired and the elderly people. *TENCON 2021–2021 IEEE Region 10 Conference (TENCON)*, 658–663. <https://doi.org/10.1109/TENCON54134.2021.9707245>

Kaufman-Scarborough, C., & Childers, T. L. (2009). Understanding Markets as Online Public Places: Insights from Consumers with Visual Impairments. *Journal of Public Policy and Marketing*, 28(1), 16–28. <https://doi.org/10.1509/jppm.28.1.16>

Kim, J., & Park, J. (2005). A consumer shopping channel extension model: attitude shift toward the online store. *Journal of Fashion Marketing and Management: An International Journal*, 9(1), 106–121. <https://doi.org/10.1108/13612020510586433>

Liu, G., Ding, X., Yu, C., Gao, L., Chi, X., & Shi, Y. (2019). “I bought this for me to look more ordinary”: A study of blind people doing online shopping. *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*, 1–11. <https://doi.org/10.1145/3290605.3300602>

Mainardes, E. W., Coutinho, A. R. S., & Alves, H. M. B. (2023). The influence of the ethics of E-retailers on online customer experience and customer satisfaction. *Journal of Retailing and Consumer Services*, 70, 103171. <https://doi.org/10.1016/j.jretconser.2022.103171>

Martin, J., Mortimer, G., & Andrews, L. (2015). Re-examining online customer experience to include purchase frequency and perceived risk. *Journal of Retailing and Consumer Services*, 25, 81–95. <https://doi.org/10.1016/j.jretconser.2015.03.008>

Math, S. B., Gowda, G. S., Basavaraju, V., Manjunatha, N., Kumar, C. N., Philip, S., & Gowda, M. (2019). The Rights of Persons with Disability Act, 2016: Challenges and opportunities. *Indian Journal of Psychiatry*, 61, 809–815. 10.4103/psychiatry.IndianJPsychiatry_105_19

Minhas, A. (2022, July 8). *E-commerce in India - statistics & facts*. Statista. <https://www.statista.com/topics/2454/e-commerce-in-india/#topicOverview>

Murphy, P. E., & Enis, B. M. (1986). Classifying Products Strategically. *Journal of Marketing*, 50(3), 24. <https://doi.org/10.2307/1251583>

Naderifar, M., Goli, H., & Ghaljaie, F. (2017). Snowball Sampling: A Purposeful Method of Sampling in Qualitative Research. *Strides in Development of Medical Education*, 14(3). <https://doi.org/10.5812/sdme.67670>

Narasimhan, N. (2017, January 23). *Digital accessibility in the Rights of Persons with Disabilities Act 2016*. The Center for Internet and Society. <https://cis-india.org/accessibility/blog/digital-accessibility-in-the-rights-of-persons-with-disabilities-act-2016>

National Informatics Centre. (2023). *Guidelines for Indian Government Websites*. [https://guidelines.india.gov.in/introduction/#:~:text=While%20the%20earlier%20versions%20were,In\)%2C%20so%20that%20the%20experience](https://guidelines.india.gov.in/introduction/#:~:text=While%20the%20earlier%20versions%20were,In)%2C%20so%20that%20the%20experience)

Office of the Registrar General & Census Commissioner. (2011). *Census Tables*. Ministry of Home Affairs, Government of India.

Rajamma, R. K., & Neeley, C. R. (2005). Antecedents to Shopping Online: A Shopping Preference Perspective. *Journal of Internet Commerce*, 4(1), 63–78. https://doi.org/10.1300/J179v04n01_03

Riedel, A., Messenger, D., Fleischman, D., & Mulcahy, R. (2021). Consumers experiencing vulnerability: A state of play in the literature. *Journal of Services Marketing*, March. <https://doi.org/10.1108/JSM-12-2020-0496>

Rose, S., Clark, M., Samouel, P., & Hair, N. (2012). Online Customer Experience in e-Retailing: An Empirical Model of Antecedents and Outcomes. *Journal of Retailing*, 88(2), 308–322. <https://doi.org/10.1016/j.jretai.2012.03.001>

- Roy, G., Basu, R., & Ray, S. (2023). Antecedents of Online Purchase Intention Among Ageing Consumers. *Global Business Review*, 24(5), 1041–1057. <https://doi.org/10.1177/0972150920922010>
- Sadler, G. R., Lee, H.-C., Lim, R. S.-H., & Fullerton, J. (2010). Recruitment of hard-to-reach population subgroups via adaptations of the snowball sampling strategy. *Nursing & Health Sciences*, 12(3), 369–374. <https://doi.org/10.1111/j.1442-2018.2010.00541.x>
- Saha, S. K., Duarte, P., Silva, S. C., & Zhuang, G. (2023). The Role of Online Experience in the Relationship Between Service Convenience and Future Purchase Intentions. *Journal of Internet Commerce*, 22(2), 244–271. <https://doi.org/10.1080/15332861.2022.2045767>
- Sathya, J., Babu, M., Gayathri, J., Indhumathi, G., Samad, A. Z., & Anandhi, E. (2023). Compulsive Buying Behavior and Online Shopping Addiction of Women. *Information Sciences Letters*, 12(5), 1641–1650. <https://doi.org/10.18576/isl/120512>
- Schaefer, K. (2003). E-Space Inclusion: A Case for the Americans with Disabilities Act in Cyberspace. *Journal of Public Policy and Marketing*, 22(2), 223–227. <https://doi.org/10.1509/jppm.22.2.223.17638>
- Schwartz, N., Buliung, R., & Wilson, K. (2023). Experiences of food access among disabled adults in Toronto, Canada. *Disability & Society*, 38(4), 610–634. <https://doi.org/10.1080/09687599.2021.1949265>
- Shim, S., Eastlick, M. A., Lotz, S. L., & Warrington, P. (2001). An Online Prepurchase Intentions Model: The Role of Intention to Search. *Journal of Retailing*, 77(3), 397–416. [https://doi.org/10.1016/S0022-4359\(01\)00051-3](https://doi.org/10.1016/S0022-4359(01)00051-3)
- Sloan, D., Heath, A., Hamilton, F., Kelly, B., Petrie, H., & Phipps, L. (2006). Contextual web accessibility – maximizing the benefit of accessibility guidelines. *Proceedings of the 2006 International Cross-Disciplinary Workshop on Web Accessibility (W4A) Building the Mobile Web: Rediscovering Accessibility? – W4A*, 121. <https://doi.org/10.1145/1133219.1133242>
- Smith, A. J., Flowers, P., & Larkin, M. (2022). *Interpretative Phenomenological Analysis: Theory, Method and Research* (2nd revised ed.). SAGE Publications.
- Stangl, A. J., Kothari, E., Jain, S. D., Yeh, T., Grauman, K., & Gurari, D. (2018). BrowseWithMe: An online clothes shopping assistant for people with visual impairments. *Proceedings of the 20th International ACM SIGACCESS Conference on Computers and Accessibility*, 107–118. <https://doi.org/10.1145/3234695.3236337>
- Starks, H., & Trinidad, S. B. (2007). Choose Your Method: A Comparison of Phenomenology, Discourse Analysis, and Grounded Theory. *Qualitative Health Research*, 17(10), 1372–1380. <https://doi.org/10.1177/1049732307307031>
- Tan, K.-L., Hii, I. S. H., Lim, X.-J., & Wong, C. Y. L. (2024). Enhancing purchase intentions among young consumers in a live-streaming shopping environment using relational bonds: Are there differences between “buyers” and “non-buyers”? *Asia Pacific Journal of Marketing and Logistics*, 36(1), 48–65. <https://doi.org/10.1108/APJML-01-2023-0048>
- The International Agency for the Prevention of Blindness. (2022). *Vision Atlas*. <https://www.iapb.org/learn/vision-atlas/>
- Valerio, M. A., Rodriguez, N., Winkler, P., Lopez, J., Dennison, M., Liang, Y., & Turner, B. J. (2016). Comparing two sampling methods to engage hard-to-reach communities in research priority setting. *BMC Medical Research Methodology*, 16(1), 146. <https://doi.org/10.1186/s12874-016-0242-z>
- van Manen, M. (1997). *Researching Lived Experience Human Science for an Action Sensitive Pedagogy* (2nd ed.). Routledge.
- World Health Organization. (2022). *World Report on Disability 2011*. <https://www.who.int/teams/noncommunicable-diseases/sensory-functions-disability-and-rehabilitation/world-report-on-disability>
- World Wide Web Consortium. (2023a). *Making the Web Work*. <https://www.w3.org/>

World Wide Web Consortium. (2023b, July). *W3C Accessibility Guidelines (WCAG) 2.2*. <https://www.w3.org/TR/wcag-3.0/#dfn-functional-need>

Xiao, Y., Liu, M., & Wu, B. (2023). The Effect of social appearance anxiety on the online impulse purchases of fashionable outfits among female college students during pandemic periods: The mediating role of self-control and the moderating role of subjective socioeconomic status. *Psychology Research and Behavior Management, Volume 16*, 303–318. <https://doi.org/10.2147/PRBM.S392414>

Yu, H., Tullio-Pow, S., & Akhtar, A. (2015). Retail design and the visually impaired: A needs assessment. *Journal of Retailing and Consumer Services, 24*(C), 121–129. <https://doi.org/10.1016/j.jretconser.2015.03.001>

Zhang, Q., Patel, P., & Lowery, C. M. (2023). Protecting Low-Income Consumers in the Era of Digital Grocery Shopping: Implications for WIC Online Ordering. *Nutrients, 15*(2), 390. <https://doi.org/10.3390/nu15020390>