Journal of Medical Rehabilitation Science, Volume 2. Issue 1, pp: 1 – 7 (2025)

Original Article

Accessibility of Shopping Malls for Mobility-Impaired People in Jeddah 2018

Amna Abdullah Shoman[1]*, Wenas Jamal Assiri[2], Budoor Mohammad Amba[2], Dana Ali Aljohani[3], Ahmad Alarfaj[4]

[1]Department of Occupational Therapy, Faculty of Medical Team, The Saudi Autistic Society, Jeddah, Saudi Arabia
[2]Department of Occupational Therapy, Faculty of Rehabilitation Team, Abdul Latif Jameel Hospital for Medical Rehabilitation, Jeddah, Saudi Arabia.
[3]Department of Physical and Occupational Therapy, International Medical Center Hospital, Jeddah, Saudi Arabia.
[4] Medical Rehabilitation and Physical Therapy Department, National Guard Hospital, Jeddah Branch, Saudi Arabia.

Address for correspondence:
amna abdullah shoman. department of occupational team, the saudi autistic society, jeddah, saudi arabia.
e-mail: ot.amnashoman@gmail.com

Submission: 06-12-2024
Accepted: 13-02-2025
Published: 01-03-2025

This article can be accessed online at: https://journals.kau.edu.sa/index.php/JRS/index
Doi: 10.4197/Mrs.2-1.1

Abstract:

BACKGROUND: Improving the accessibility for individuals with mobility impairments is a key aspect of occupational therapy in enhancing their quality of life. Shopping malls are an essential part of entertainment venues that must be accessible for a variety of individuals in the community. **OBJECTIVE**: The objective of this study was to evaluate the accessibility of shopping malls in Jeddah, Saudi Arabia, with the aim of identifying potential improvements to enhance the quality of life for individuals with physical disabilities. **MATERIALS and METHODS:** A total of twenty-four shopping malls as listed in Jeddah Municipality were included in this study. Senior occupational therapy students assessed accessibility of parking, routes, entrances, elevators, ramps, and restrooms for included facilities using the Americans with Disabilities Act Checklist for Readily Achievable Barrier Removal. **RESULTS:** The findings indicated that 75% of shopping malls in Jeddah were compliant with accessibility standards. The highest score, 90%, was achieved by two malls out of a total of twenty-four, while the lowest score recorded was 55%. Seventy-nine percent of the route pathways complied with the guidelines, while 71% of the entrances met the accessibility standards. Ramps demonstrated 63% compliance, while elevators showed 38%, corresponding to 33% compliance for parking facilities. Restrooms had the lowest compliance, with a score of 14%. **CONCLUSION:** Shopping malls in Jeddah need enforcement policies to improve accessibility and quality of life for individuals with impaired mobility.

Keywords: Accessibility, Physical Disability, Impairment, Shopping Malls, Mobility

Introduction

The number of people living with a disability is significantly high. A recent update from the World Health Organization (WHO) indicates that individuals with disabilities represent approximately 25% of the global population. [1]. The General Authority for Statistics of Saudi Arabia (GAStat) recognizes individuals with disabilities as a significant portion of the population, comprising 7.1% of the total Saudi population [2]. In Saudi Arabia (SA), mobility and physical impairments are the most common types of disabilities, accounting for 29.13% of the population with disabilities [2,3]. These numbers highlight the importance of investigating the level of accessibility in certain public places [3]. The Unified National Platform of SA outlines the rights of individuals with disabilities, with a commitment to ensuring a decent and dignified life for all citizens and residents [3]. This includes improving service delivery in key areas such as protection from harm, social care,

How to cite this article: Shoman AA, Assiri WJ, Amba BM, et. al. Accessibility of Shopping Malls for Mobility-Impaired People in Jeddah 2018. J Med Rehab Sci. 2025;2(1):1-7.

rehabilitation centers, healthcare, and equal access to education. Additionally, it emphasizes initiatives for employment, mobility and transportation, accessible facilities and parking, sign language support, housing, and mobile services dedicated to individuals with disabilities [4]. Disability law and regulations in SA helps persons with disabilities to achieve independence and participate actively in society by giving them access to a barrier-free environment [5]. However, in practice, accessibility of public places for persons using wheelchairs in SA is extremely poor or absent due to architectural barriers in the built environment [5]. There is an acute restriction of accessibility in SA to public roads and buildings to individuals using wheelchairs [5].

To enhance public spaces in Saudi Arabia for individuals with disabilities, occupational therapists must assess the current level of accessibility. Occupational therapy is in a unique profession in contributing to the development and fulfilment of participation for persons with and without disabilities [6]. Occupational therapy has a key role in supporting community mobility, particularly for individuals with impairment and activity limitations [7]. Occupational therapy practitioners focus on helping individuals with mobility impairments gain independence in various settings [8]. Accessibility is the quality of access as well as the ability to use and benefit from the services within the environment [9]. The primary requirement for mobility is physical accessibility, supported by effective legislation, to ensure a safe pathway to social inclusion [9].

Rehabilitation and occupational therapy services aim to address patients' needs and promote independence in all aspects of daily life. This includes encouraging patients' reintegration into the community by facilitating social and functional interactions with others and their surrounding environment [10]. Several studies have been conducted in various regions of Saudi Arabia regarding accessibility for individuals with physical disabilities, with the majority focusing on the accessibility of mosques [11, 12, 13]. Mosque is a place where Muslims can come together for prayer, as praying together holds significant importance in Islam [14]. In Riyadh, the capital city of Saudi Arabia, mosques were found to be inaccessible for wheelchair users. Similarly, compliance scores for mosques in Jeddah were also found to be low [12]. Mosques in the Al Ahsa region were also found to be inaccessible for wheelchair users, hindering individuals with physical disabilities from participating in religious activities at mosques [13]. The current situation forces prayer with physical disability in isolation in their houses, preventing them from participating in an important part of their faith [11, 12, 13]. On the other hand, a study conducted at King Abdulaziz Medical City in Riyadh found that more than two-third of people with disabilities are willing to visit KAMC due to the high accessibility [15].

Accessibility is a fundamental prerequisite for individuals with disabilities to fully enjoy their human rights, live independently, and participate equally in the community [16]. Occupational therapy is a professional practice that is both philosophically and epistemologically grounded in the multidimensional nature of individuals in action within a given context [17]. As such, assessing accessibility becomes a key area of intervention for occupational therapists [17]. Practitioners of occupational therapy have a crucial role in facilitating the integration of individuals into the environments with using social participation-based interventions to focus on enabling people to explore and expand on social support in their society [18]. Therefore, the purpose of this study was to investigate the level of accessibility in shopping malls that are considered as one of the major entertaining facilities in Jeddah city.

Materials and Methods

Study Design

This study employed a descriptive design [19], which was deemed appropriate for observing and documenting information, as well as gathering preliminary data to support future research [19]. The study was approved by the King Abdullah International Medical Research Center (RYD-18-417780-172379).

Sittings

A total of twenty-four shopping malls as listed in Jeddah Municipality were included in this study. The administrative malls that agreed to participate provided informed consent before the environmental assessment was conducted, ensuring that the anonymity of the malls was maintained throughout the process. The inclusion criteria for the study were malls located within the Jeddah region and officially listed in the Municipality.

Procedure

This study was conducted over a three-week period at malls in the Jeddah region, with one to two malls assessed each day. A team of senior students from the occupational therapy program carried out the assessments. The malls were selected based on their location, and the team evaluated them accordingly.

Instrument measure

The ADA Checklist for Readily Achievable Barrier Removal for Existing Facilities is based on four priority areas: (1) Accessible Approach and Entrance, (2) Access to Goods and Services, (3) Usability of Restrooms, and (4) Additional Access [20]. The criteria for the ADA assessment are typically answered with a "yes" or "no" response [20]. The investigators used this checklist to evaluate the accessibility of parking, routes, entrances, elevators, ramps, and restrooms in existing facilities through direct observation and measurement.

Data analysis

Descriptive statistics and frequency analysis were conducted to outline the general characteristics of the study findings. Data analysis was performed using the Statistical Package for the Social Sciences (SPSS) V26 2019 program, with simple descriptive statistics summarized as frequency and percentage [21]. The frequency and percentage values reflect the compliance of buildings with the items listed in the ADA checklist's accessibility areas. Each priority area in the checklist is further divided into subsections, with percentages used to present the findings for each specific area.

Results

A total of twenty-four out of twenty-five shopping malls met the inclusion criteria for the study, with one mall listed in the Jeddah Municipality still under construction. None of the malls included in Jeddah were fully compliant with all the items on the ADA checklist.

Two shopping malls achieved the highest overall compliance score of 90.1%, while the mall with the lowest compliance score received 50.5%. The compliance scores of all malls were categorized into ranges. The results were rounded to the nearest whole number, as shown in (Figure 1).

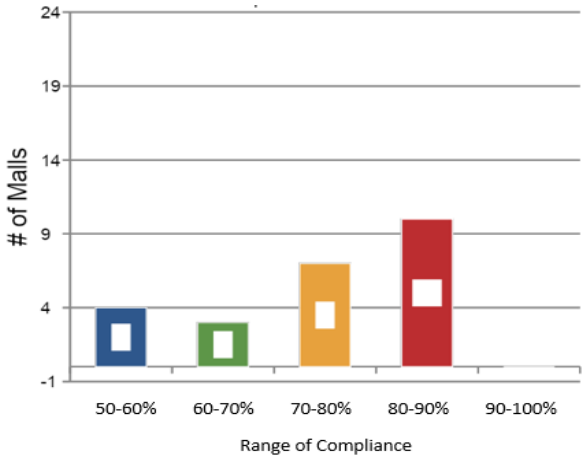
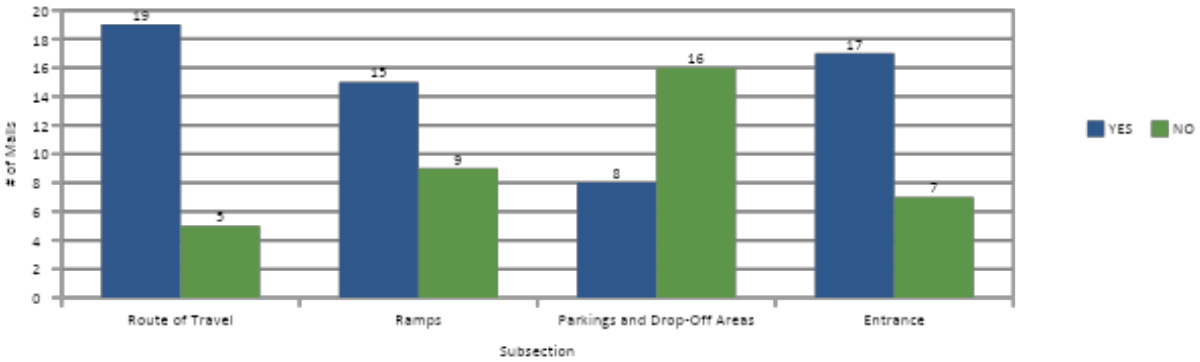


FIGURE 1: THE COMPLIANCE SCORES OF ALL MALLS CATEGORIZED IN RANGES WITH APPROXIMATION

The findings were described according to the checklist subsections within each of the four priorities. The first priority, Accessible Approach/Entrance, consists of four subsections: (1) Route of Travel, (2) Ramps, (3) Parking and Drop-Off Areas, and (4) Entrance (19). Most malls in Jeddah exhibited higher standards for routes, ramps, and entrances compared to parking and drop-off areas, as shown in (Figure 2).

Access to Goods and Services consists of twelve subsections: (1) Horizontal Circulation, (2) Doors, (3) Rooms and Spaces, (4) Emergency Egress, (5) Signage for Goods and Services, (6) Directional and Informational Signage, (7) Controls, (8) Seats, Tables, and Counters, (9) Vertical Circulation, (10) Stairs, (11) Elevators, and (12) Lifts. (11)

FIGURE 2: THE RESULTS OF THE FOUR SUBSECTIONS: (1) ROUTE OF TRAVEL (2) RAMPS (3) PARKING AND DROP-OFF AREAS, AND (4) ENTRANCE



More than half of the malls included in this study exhibited positive compliance with building standards in the first seven subsections of Access to Goods and Services (Figure 3). However, specific questions, such as those pertaining to Braille language, impacted the study's findings in the categories of Signage for Goods and Services, Controls, and Elevators, despite their limited relevance to individuals with mobility impairments (Figure 4). After excluding questions unrelated to individuals with physical impairments, calculations were performed on the revised list of relevant items (Figure 5).

The compliance of malls was higher in the final two subsections: (1) Directional and Informational Signage, and (2) Seats, Tables, and Counters (Figure 6).

The usability of restrooms, including categories such as Getting to the Restrooms, Doorways and Passages, Stalls, and Lavatories, showed low compliance in all four areas across the included malls. No malls were compliant in the Stalls subsection, as shown in Figure 7.

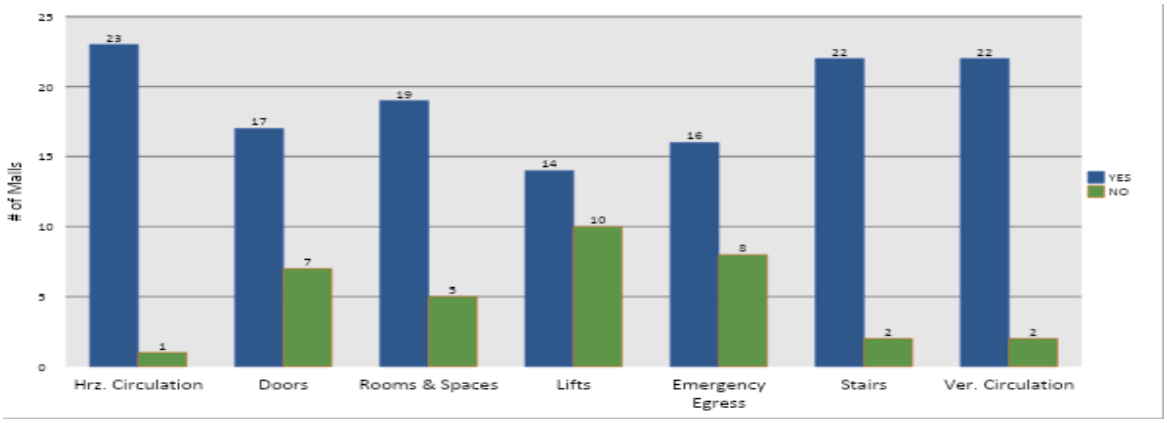


FIGURE 3: THE RESULTS OF ACCESSING TO GOODS AND SERVICES

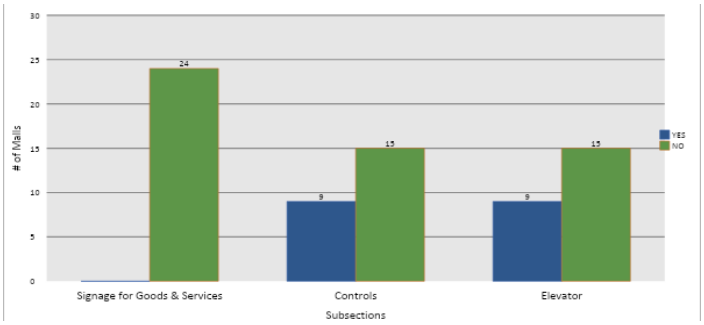


FIGURE 4: CATEGORIES WERE NOT FULLY RELATED TO POPULATIONS WITH MOBILITY IMPAIRED

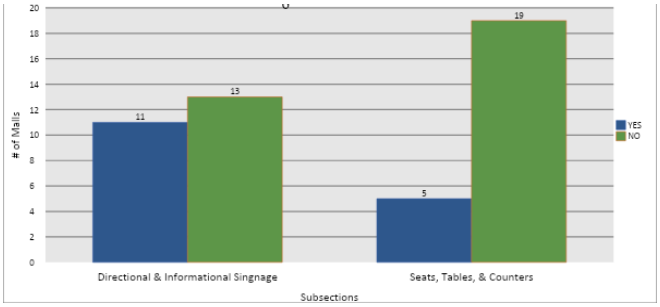


FIGURE 6: THE FINDINGS OF THE LAST TWO SUBSECTIONS

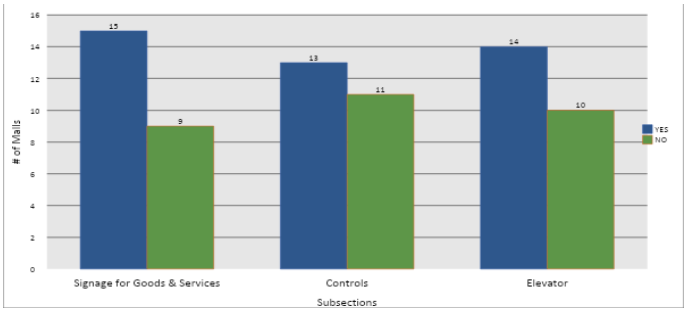


FIGURE 5: THE RESULTS AFTER EXCLUDING UNRELATED QUESTIONS TO PERSONS WITH PHYSICAL DISABILITY

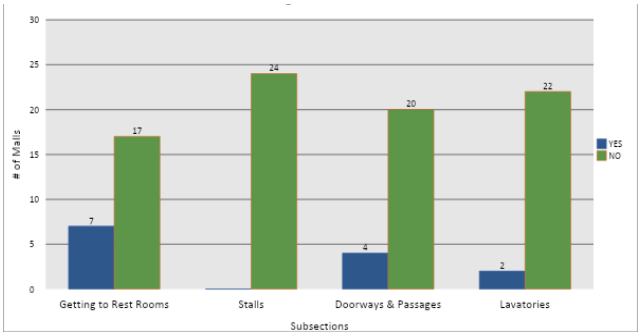


FIGURE 7: THE RESULTS OF USABILITY OF REST ROOMS INCLUDES GETTING TO THE REST ROOMS, DOORWAYS AND PASSAGES, STALLS, AND LAVATORIES

The final priority, Additional Access, includes categories such as Drinking Fountains and Telephones. This priority is relevant to institutions that provide these facilities; however, it was not applicable to any of the malls in this study. As a result, this priority was not included in the total score calculation, as shown in Figure 8.

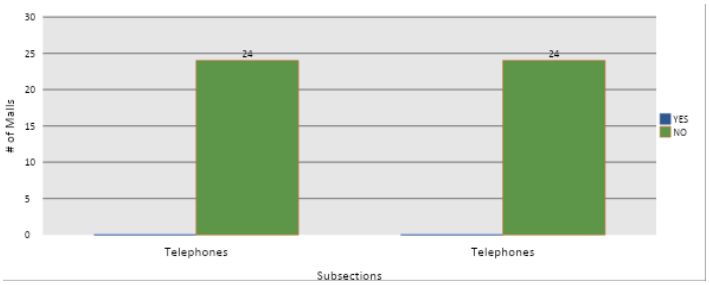


FIGURE 8: ADDITIONAL ACCESS CATEGORY'S RESULTS

Discussion

This study aimed to assess the accessibility of shopping malls in Jeddah, as these malls are key recreational facilities in the city, and everyone has the right to access them. The results indicated that shopping malls in Jeddah are not fully accessible for individuals with mobility impairments and need to comply with ADA standards to ensure equitable access.

The results of the current study indicated that none of the malls achieved 100% compliance with ADA requirements. The two malls with the highest compliance scored 90%, while the lowest score was 50%. The highest compliance percentage was observed in mall routes, with 79% compliance. Ramps showed 63% compliance, with the majority failing to meet international standards, particularly in terms of width. Parking facilities had the lowest level of accessibility, with only 33% compliance. Some of the assigned malls did not implement measures to ensure that parking spaces were reserved for individuals with disabilities, while others did not provide designated parking for this population. The entrances and travel routes in the included Jeddah malls showed 71% accessibility.

Our results also indicated that the elevator section scored 38% compliance. The elevator control buttons were not positioned at an accessible height for individuals with mobility impairments, nor was the emergency button reachable. Restrooms were found to be significantly inaccessible in all the malls assessed, with only a 14% compliance level. Most malls that provided restrooms for individuals with physical disabilities had issues such as inappropriate toilet heights or the absence of grab bars, which could compromise safety. Most of the restroom lavatories did not have suitable knee clearance for people using wheelchairs to access and using. There were no signs indicating alternative directions to accessible restrooms at the malls with inaccessible restroom facilities.

The results also indicated that the additional access features, such as telephones and drinking fountains, were excluded from the data analysis, as they were not provided in Jeddah malls. The absence of these features did not impact the level of accessibility for the targeted population, as neither individuals with disabilities nor the general public had access to these services. Overall, the compliance rate was 75%, which included routes, entrances, ramps, parking, elevators, and restrooms.

The current study is one of the first to focus on the accessibility for individuals with mobility impairments in SA. It aligns with the objectives of the 2030 Vision, which emphasizes equality and aims to improve all aspects of life [22]. The sample size is highly representative, covering 96% of the population across all geographical regions. However, the ADA checklist used does not include a standard reference guide for determining the minimum accessibility requirements for shopping malls catering to individuals with mobility impairments.

Future research should focus on investigating the accessibility of public buildings such as government offices, banks, and gyms. Key areas for modification include hospitals, schools, daycare centers, and mosques. Given that individuals with physical disabilities are often reliant on accessing public buildings, it is crucial to address these spaces. Additionally, conducting similar research in other cities across SA is recommended to gain a comprehensive understanding of accessibility challenges nationwide.

Conclusion

The current study presents discouraging results, highlighting the need for stronger enforcement of policies to improve the accessibility of shopping malls in Jeddah. These findings are significant in the current context and may contribute to enhancing accessibility in the construction of future buildings while increasing awareness among the relevant authorities. Additionally, further research should be conducted on other public facilities to ensure that buildings are made accessible to individuals with mobility impairments.

Acknowledgement:

The authors wish to acknowledge all the administrative mall centres in this study for their cooperation.

Ethical approval statement

The study was approved by the King Abdullah International Medical Research Center (RYD-18-417780-172379).

Financial support and sponsorship

This study was conducted without external financial support.

Conflicts of interest

The authors report no conflicts of interest in this work.

References

1. World Health Organization. World Report Disability. 2023.
2. Bindawas SM, Vennu V. The national and regional prevalence rates of disability, type of disability and severity in Saudi Arabia—Analysis of 2016 demographic survey data. Int J Environ Res Public Health. 2018 Mar;15(3):41.
3. Al-Jadid MS. Disability in Saudi Arabia. Saudi Med J. 2013;34(5):453-60.
4. Unified National Platform. Saudi Arabia National Portal [Internet]. My.gov.sa. 2021 [cited 2025 Mar 19].
5. Mohammad A, Al-Harbi TS. Design of the built environment and the integration of wheelchair users in the Kingdom of Saudi Arabia: Commentary and exploratory study. J Dev Disabil. 2016 May 1;22(2):121.
6. Law M. Participation in the occupations of everyday life. Am J Occup Ther. 2002 Nov 1;56(6):640-9.
7. Di Stefano M, Stuckey R, Lovell R. Promotion of safe community mobility: Challenges and opportunities for occupational therapy practice. Aust Occup Ther J. 2012 Feb 1;59(1):98.
8. Radomski MV, Trombly CA. Occupational therapy for physical dysfunction. Philadelphia (PA): Lippincott Williams & Wilkins; 2008.
9. Litman T. Evaluating accessibility for transport planning. Victoria (BC): Victoria Transport Policy Institute; 2017.
10. Evcil AN. Wheelchair accessibility to public buildings in Istanbul. Disabil Rehabil Assist Technol. 2009 Jan 1;4(2):76-85.
11. Peterson HP. Built environment accessibility in the Eastern Province of the Kingdom of Saudi Arabia as seen by persons with disabilities. J Access Des All. 2021 May 31;11(1):115-47.
12. Abu Tariah H, Ghasham N, Alolayan M, Alahmadi B, Alqarni A. Wheelchair accessibility of mosques in Riyadh. Work. 2018 Jan 1;60(3):385-91.
13. Sarsak HI. Assessment of mosques accessibility for prayers with disabilities. Ann Physiother Occup Ther. 2021;4(2).
14. Mani P, Vadivu S, Alshakhs H, Alrashed M, Almeaibed A, Almulhim A, et al. Assessment of accessibility preparation for people with special needs at Al Ahsa mosques.
15. George J, Philip W, Al Shammari AA, Qudaimi A, Faisal H, Ghemlas SS. A survey to assess the facility access of people with mobility disabilities in King Abdulaziz Medical City, Riyadh, Saudi Arabia. Indian J Public Health Res Dev. 2018 Jul 1;9(7).
16. Ferri D. Advancing an embodied understanding of accessibility for persons with disabilities. J Hum Rights Pract. 2024 Dec 30.
17. Nalberth F, Eduarda M, Lourenço CE, Pereira V, Monteiro TC, Grimaldi M. Discrimination and access to healthcare for people with disabilities: An integrative literature review. Aquichan. 2024 Sep 13;24(3):1–16.
18. Baumann P, Thomas M, Voegel A. Occupational therapy's role in transitioning & community integration [Internet]. UND Scholarly Commons. 2024 [cited 2025 Jan 30].
19. DiPietro NA. Methods in epidemiology: Observational study designs. Pharmacotherapy. 2010 Oct;30(10):973–84.
20. Architectural, Transportation Barriers Compliance Board, United States Department of Justice, Civil Rights Division, Public Access Section. Americans with Disabilities Act Accessibility Guidelines: Checklist for Buildings and Facilities. BNi Building News; 1996.
21. Bryman A, Cramer D. Quantitative data analysis with IBM SPSS 17, 18 & 19: A guide for social scientists. Routledge; 2012 Aug 21.
22. Khan MU. Saudi Arabia's Vision 2030. Defence J. 2016 Jun 30;19(11):36.

إمكانية الوصول إلى مراكز التسوق للأشخاص ذوي الإعاقة الجسدية في مدينة جدة 2018

امنه عبدالله شومان[1]، وناس جمال عسيري[2]، بدور محمد امبا[2]، دانه علي الجهني[3]، أحمد العرفج[4]
1 قسم العلاج الوظيفي، فريق الكادر الصحي، الجمعية السعودية للتوحد، جدة، المملكة العربية السعودية
2 قسم العلاج الوظيفي، قسم التأهيل، مستشفى عبد اللطيف جميل لخدمات الرعاية الصحية وإعادة التأهيل، جدة المملكة العربية السعودية
3 قسم العلاج الطبيعي والوظيفي، مستشفى المركز الطبي الدولي، جدة ، المملكة العربية السعودية
4 قسم العلاج الطبيعي والتأهيل، مستشفى الحرس الوطني بجدة، المملكة العربية السعودية

المستخلص:
الخلفية: إن إتاحة الوصول للأشخاص ذوي الإعاقة الحركية يعد أحد أدوار العلاج الوظيفي في تحسين نوعية الحياة. وتعتبر مراكز التسوق جزءًا أساسيًا من أماكن الترفيه التي يجب أن تكون متاحة لمجموعة متنوعة من الأفراد في المجتمع. **الهدف:** هدفت هذه الدراسة إلى معرفة مستوى إمكانية الوصول إلى مراكز التسوق في مدينة جدة بالمملكة العربية السعودية، بهدف تحسين جودة الحياة للأشخاص ذوي الإعاقات الجسدية. **المواد والطرق:** تم تضمين إجمالي أربعة وعشرين مركزًا تجاريًا مدرجًا في بلدية جدة في هذه الدراسة. قام طلاب العلاج الوظيفي في السنة الرابعة بتقييم إمكانية الوصول إلى مواقف السيارات والطرق والمداخل والمصاعد والممرات والمراحيض للمرافق المشمولة لمراكز التسوق باستخدام مقياس قائمة التقييم الأمريكية المخصصة لإزالة العوائق البيئية لذوي الإعاقة. تم استخدام برنامج الحزمة الإحصائية للعلوم لتحليل البيانات ووصف الإحصائيات والنسب المئوية. **النتائج:** أظهرت النتائج أن 75% من مراكز التسوق في جدة كانت متوافقة مع المعايير. أعلى نسبة مئوية من التوافق هي 90% من بين أربعة وعشرين مركزاً تجارياً، بينما كانت أقل درجة 55%. مسارات الطرق متوافقة مع المقياس بنسبة تسعة وسبعون في المئة 79%، وكانت المداخل ملائمة بنسبة 71%. بالنسبة إلى المنحدرات المخصصة لكراسي ذوي الإعاقة الجسدية فقد كانت متماثلة بنسبة 63%، في حين أظهرت المصاعد توافقاً بنسبة 38%. مواقف السيارات كانت متوافقة بنسبة 33% بينما حصلت دورات المياه على الحد الأدنى من التناسب بنسبة 14%. **الخلاصة:** تحتاج مراكز التسوق في جدة إلى تدخل من الجهات المسؤولة لتحسين إمكانية الوصول وجودة الحياة للأشخاص ذوي الإعاقة الجسدية .

الكلمات الدالة: إمكانية الوصول، مراكز التسوق، التنقل، الإعاقة الجسدية، الإعاقة.

الباحث الرئيسي:
امنه عبدالله شومان
قسم العلاج الوظيفي، فريق الكادر الصحي، الجمعية السعودية للتوحد، جدة، المملكة العربية السعودية
صندوق البريد: 2892,جدة، 6534
البريد الالكتروني: ot.amnashoman@gmail.com