


# Acceptance of Students with Physical Disabilities in Medical Schools in Saudi Arabia: Perception, Experience, and Recommendation

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**Introduction:** Physical disability is seen as a burden in many countries, and it has been a challenge to create a healthy environment and a fair living experience for all people with physical disability. For a long time, the number of students accepted to medical school has been limited, and the number of successful experiences for doctors with disabilities is inadequate worldwide. This study aims to investigate the perception of the public, medical educators, and medical students about the acceptance of students with physical disabilities in medical schools in Saudi Arabia.

**Methods:** The study uses two methodological strategies: a quantitative cross-sectional survey and a qualitative interview with a young female doctor with a physical disability to discuss her educational experience and work journey in Saudi Arabia and abroad. The study was conducted at the College of Medicine, King Saud bin Abdulaziz University for Health Sciences, Riyadh, Saudi Arabia.

**Results:** The perception survey results showed a broad acceptance of the public, medical educators, and medical students regarding the enrollment of students with physical disabilities in medical schools and regarding being treated by doctors with physical disabilities. The participants also believed that students with physical disabilities are compatible with most doctors' jobs.

**Conclusion:** Students with physical disabilities should be able to study and practice medicine. Educational and health institutions should apply more effort and commitment to provide the necessary accommodations to accept students and doctors with physical disabilities based on their cognitive ability but not their physical disability.

**Keywords:** medical education, education, medical school, disability, students with physical disabilities

## Introduction

Disability is a priority topic in all communities worldwide. There are several definitions of disability, which are categorized according to causes, timing, and nature. Some disabilities are congenital, while others are acutely developed or chronically acquired due to injury, accident, or debilitating illness.<sup>1</sup> The World Health Organization (WHO) defines disabilities as an umbrella term that covers impairments, activity limitations, and participation restrictions. An impairment is a problem that affects body function or structure, an activity limitation causes a struggle encountered in performing a task or action, and a participation restriction is a problem in an individual's contribution in certain life situations.<sup>2</sup> The Labor and Workman Law of Saudi Arabia defines a person with a disability as "any person whose capacity to achieve and continue a suitable job has diminished as a result of a physical or mental infirmity."<sup>3</sup> However, disability is usually associated with inability, and people with disabilities continue to be stigmatized.<sup>4</sup>

The estimated worldwide prevalence of disability is 15%, ranging from 1% to 30%.<sup>5,6</sup> According to the Disability Survey 2017 by the General Authority for Statistics in Saudi Arabia (2017), 7.1% of the Saudi population had difficulties, of which 37.6% had mobility (eg, walking or going up the stairs).<sup>7</sup> Additionally, the Saudi Arabian government has enacted significant legislation to address the rights and well-being of individuals with a disability. Saudi Arabia's Legislation on Disability was enacted in 1987 for individuals with disabilities to ensure their equal rights in society.<sup>3</sup>

In 2000, the Disability Code was approved by the Saudi Arabian government, guaranteeing individuals with disabilities access to various services such as medical, psychological, social, educational, and rehabilitation through public agencies. In turn, the National Strategy for the Development of General Education aims to provide all students with equal education opportunities and an extensive range of support, focusing on the needs of students with disabilities.<sup>8</sup>

In terms of medical education, many medical colleges worldwide have accepted students with physical disability. There are 37 medical schools in Saudi Arabia, with around 7000 alumni annually.<sup>9,10</sup> However, there are no records about the number of students with physical disability accepted or graduated from these medical schools. In addition, the admission criteria for most of these medical schools include the condition that “the applicant must be medically fit.”<sup>11–13</sup> There are also no reports about the number of physicians with disabilities in Saudi Arabia. This missing information causes a significant gap in published scientific research, specifically addressing rules, regulations, and the experiences of educators, students, and applicants with disabilities, particularly within medical education. Hence, it remains uncertain if there are sufficient “equal education opportunities” to guarantee the admission of students with disability into medical schools in Saudi Arabia.

Therefore, the current study aimed to investigate the general population’s perception and the medical academics in the College of Medicine at King Saud bin Abdulaziz University for Health Sciences (KSAU-HS) about the enrollment of students with physical disabilities in medical schools in Saudi Arabia. The study also evaluates the experience of a female Saudi doctor with a physical disability who studied medicine and worked in several national and international hospitals, including her recommendations for a disability-friendly environment in medical schools.

## Methodology

The study design was mixed methods, including a cross-sectional structured questionnaire and a semi-structured interview. Quantitatively, the study used survey questions to ascertain the perceptions of the general Saudi population and medical educators (academic and clinical), medical students, and medical interns regarding the enrollment and performance of Saudi medical students with physical disabilities in medical schools in Saudi Arabia. In addition, a qualitative interview-based study was conducted with a Saudi medical doctor with physical disability to share her educational experience in medical school and after graduation. The study complied with the Declaration of Helsinki and was approved by the IRB office at King Abdullah International Medical Center, Riyadh, Saudi Arabia (Study Number: NRC21R/261/06 on August 3, 2021).

The public survey consisted of 11 Likert scale questions, while the medical educators’ and students’ survey included 14 Likert scale questions. Both surveys examined the participants’ perceptions of the acceptance, feasibility, and readiness of medical schools and health organizations to receive students/doctors with physical disabilities. Three professional experts in research and education were consulted to validate the questionnaire and the interview questions. The surveys were electronically sent to the public and the medical participants, including the consent forms. Parental informed consent was required for any participant under 18 years of age. In addition, the interviewed American board-certified Saudi doctor’s informed consent included the publication of anonymized responses and her disability details.

The study was conducted at the College of Medicine at KSAU-HS, Riyadh, Saudi Arabia. The study participants had varying nationalities, genders, ages, and educational levels, and they consisted of faculty, medical students, and medical interns from the College of Medicine. Therefore, the inclusion criteria for the study included Saudi residents, medical students, medical interns, and university educators, and a Saudi consultant with a physical disability was also interviewed. This study was determined to have no exclusion criteria. The set sample size was at least 100 participants from the Saudi population from the medical educators and at least one medical doctor with a physical disability. However, to date, there is no data documenting the number of doctors with physical disability in Saudi Arabia. Thus, the study found just one physician with a physical disability to conduct the qualitative interview.

The collected data were organized in an Excel sheet and analyzed using SPSS (version 25, IBM). For statistical analysis, the current study used descriptive statistics of the collected perceptions and topographic data, including the total number of participants and the frequencies of gender, age, nationality, educational level, student medical year, and the academic and clinical titles of the educators.

## Results

### The Quantitative Survey Results

The survey was electronically distributed in April 2022 using Microsoft Forms to public educators, medical students, and medical interns. The survey was distributed through WhatsApp public groups and personal emails. The public survey was distributed via WhatsApp contacts throughout the three KSAU-HS campuses in Riyadh, Jeddah, and Al-Ahsa to guarantee that the research included more representatives of the Saudi population. At the same time, it was disseminated to the educators, students, and interns through university email, using the College of Medicine database at King Saud bin Abdulaziz University for Health Sciences. The total response to the survey was 956, including 633 (66%) participants from the Saudi population and 323 (34%) medical educators, medical students, and interns.

There were 633 responses from the public: 65% were female participants, and 35% were male (Table 1). The highest response percentage was from the age group of 36–45 years (32%), followed by the 46–55 age group and the 26–35 age group, at 26% and 17%, respectively. The public participants' educational level was primarily undergraduate (58%); 24% had a graduate degree, and 1% had a primary school education. Most of the participants from the public were Saudi (88%), while 12% of the participants were of other nationalities residing in Saudi Arabia. There were 15 (2%) public participants with physical disabilities, and 29 (5%) had a child with a physical disability. Regarding the medical educators and students (Table 2), there were more male respondents to the survey than female (56% compared to 44%). The highest response was from medical students (86%), with most of the reactions from the pre-clinical phase (95%). Educators accounted for 14% of the responses, with 70% being academic educators and 30% being clinical phase educators.

A.1. The results of the public's perceptions about the enrollment policy and the performance of students with physical disabilities in medical schools:

The results of the public perception survey are shown in Table 3. The results show that the Saudi population agrees that studying medicine and working as a doctor suits individuals with physical disabilities (53%) and that they would accept being seen by a physician with a disability (74%). The perception results also show more agreement to enroll students with a physical disability in medical school (72%), the belief that some medical specialties are more suitable for

**Table 1** Demographic Data of the Public Survey Participants

Variables	Groups	n	%
Sex	Male	222	35%
	Female	411	65%
Total		633	100%
Age Group	<18 years	3	1%
	18–25 years	36	6%
	26–35 years	106	17%
	36–45 years	201	32%
	46–55 years	166	26%
	56–65 years	107	17%
	>65 years	14	2%
Education Level	Primary school	4	1%
	Intermediate school	17	3%
	High school	96	15%
	Undergraduate degree	367	58%
	Graduate degree	149	24%
Nationality	Saudi	559	88%
	Non-Saudi	74	12%
Are you classified with a physical disability?	No	610	96%
	Yes	15	2%
	Maybe	8	1%
Do you have a child with a physical disability?	No	604	95%
	Yes	29	5%

**Table 2** Demographic Data of the Survey Participants by Educators, Medical Students, and Intern

Variables	Groups	n	%	
Gender	Male	180	56%	
	Female	143	44%	
Total		323	100%	
Participants	Educators	46	14%	
	Medical Student	278	86%	
Educators Academic Title Preclinical phase	Teaching Assistant	2	4%	45 70%
	Lecturer	6	13%	
	Assistant Professor	32	71%	
	Associate Professor	4	9%	
	Professor	1	2%	
Educators Clinical Title Clinical phase	Physician	14	74%	19 30%
	Paramedic	1	5%	
	Other	4	21%	
Medical Student	Pre-Clinical phase	258	95%	
	Clinical phase	11	4%	
	Intern	2	1%	

**Table 3** The Perception Results of the Public About the Enrolment and Performance of Students with Physical Disabilities in Medical Schools

Perception Statements	Agree	Neutral	Disagree
I think that studying in medical colleges and working as a doctor is appropriate for individuals with physical disabilities.	333 (53%)	240 (38%)	60 (9%)
I accept to be seen by a doctor with a disability and supervise my health condition.	469 (74%)	119 (19%)	45 (7%)
I agree to enroll my child with physical disabilities to study in medical colleges.	457 (72%)	136 (21%)	40 (6%)
I believe functional performance of a physician with a physical disability equivalent to that of a healthy physician.	211 (33%)	247 (39%)	175 (28%)
I think that some medical specialties are more suitable for doctors with disabilities than others.	366 (58%)	173 (27%)	94 (15%)
I think that some physical disabilities may be compatible with studying in medical colleges and working as doctors.	475 (75%)	125 (20%)	33 (5%)
I am convinced that the number of doctor working hours appropriate for doctors with disabilities.	131 (21%)	299 (47%)	203 (32%)
I think that the health administration suits doctors with disabilities more than their work in caring for patients.	217 (34%)	290 (46%)	126 (20%)
I think that spreading awareness will change the stereotyped image and contribute to the acceptance of doctors with physical disabilities.	527 (83%)	92 (15%)	14 (2%)
I think that hospitals and medical centers are prepared for the work of doctors with physical disabilities.	125 (20%)	219 (35%)	289 (46%)
I believe that regulations and laws should be amended to prepare the medical environment and hospitals to receive doctors with physical disabilities.	463 (73%)	129 (20%)	41 (6%)

doctors with disabilities (58%), and the idea that they are compatible with studying in medical colleges and working as doctors (75%).

The study also evaluated the readiness of the health environment to receive a medical doctor with a physical disability. Most participants (83%) agree that spreading awareness will change the stereotyped image and contribute to the acceptance of doctors with physical disabilities. However, only 21% of the participants were convinced that the working hours were appropriate for doctors with physical disabilities, while around 47% had a neutral opinion. Moreover, most participants (46%) believe that health organizations are not prepared for the work of doctors with physical disabilities. Thus, most study participants (73%) believe that regulations and bylaws should be improved to receive doctors with physical disabilities in hospitals.

A.2. The results of the perceptions of educators, medical students, and interns about the enrollment and performance of students with physical disabilities in medical schools:

The perceptions of the educators, medical students, and interns are shown in Table 4. Many medical educators and students believe that working as a doctor suits people with a physical disability (67%) and that they should have the opportunity to enroll in medical college (79%). The medical educators and students also support physical fitness being

**Table 4** The Perception Results of the Educators, Medical Students, and Interns About the Enrolment and Performance of Students with Physical Disabilities in Medical Schools

Perception Statements	Agree	Neutral	Disagree
I think working as a doctor suits people with physical disability.	160 (67%)	52 (22%)	27 (11%)
I think that students with physical disabilities should have equal opportunity with non-disabled students to enroll in medical colleges.	216 (79%)	30 (11%)	28 (10%)
I think physical fitness is a requirement for doctors.	117 (47%)	51 (20%)	82 (33%)
I think that the performance of students with physical disabilities is equivalent to that of students who are physically fit.	142 (55%)	43 (17%)	72 (28%)
I think that students with physical disabilities will be able to communicate well with patients and the community.	237 (82%)	26 (9%)	26 (9%)
I believe that students with physical disabilities will have equal opportunities in training, and employment after graduation.	59 (23%)	33 (13%)	168 (65%)
I feel that educators have sufficient knowledge and experiences to adequately support the learning needs of students with physical disabilities.	67 (27%)	45 (18%)	136 (55%)
I think that educators are aware of what is required to be provided for students with disability.	72 (30%)	51 (21%)	115 (48%)
I think providing individual and financial assistance will make the medical colleges accessible for students with disability.	210 (78%)	34 (13%)	25 (9%)
I think that medical colleges can accommodate students with physical disability in the future.	241 (85%)	26 (9%)	15 (5%)
I think that students with disabilities and their families understand the difficulty of accessibility, limitation of ability to be inclusive as students in medical schools.	173 (69%)	52 (21%)	24 (10%)
I think that the families of students with physical disability are aware of the range of support that their child needs to succeed in the medical college.	134 (56%)	45 (19%)	61 (25%)
I am aware of any medical college policies preventing acceptance of students with physical disabilities.	67 (26%)	25 (10%)	169 (65%)
I think that medical colleges policies support awareness to improve the accessibility to medical colleges and hospitals for physically disabled students.	69 (29%)	50 (21%)	120 (50%)
I think the policy, educational programs, and services are modifiable to support students with physical disabilities.	121 (50%)	41 (17%)	81 (33%)

one requirement for future doctors (47%) and believe that students with physical disabilities will have equal performance (55%) and communication skills (82%) as regular students. However, the medical participants believe that medical students with physical disabilities will not have adequate training and employment opportunities compared to those without physical disabilities. The medical participants also think that there is a deficit in the knowledge and experience of medical educators to support the learning needs of students with physical disabilities (55%). Thus, the medical participants agree that providing individual and financial assistance for students with physical disabilities will improve the accessibility of medical school (78%) and allow medical colleges to accommodate students with physical disabilities in the future (85%).

Additionally, the medical participants think that students with physical disabilities and their families know the limited access (69%) and support needed (56%) to succeed in medical schools. In contrast, the medical participants are unaware of any medical school policies preventing the acceptance of students with physical disabilities (65%). They also believe that the current policies of medical schools do not support the accessibility of students with physical disabilities to medical colleges and hospitals (50%).

## The Qualitative Interview Results

The study includes an interview with an American board-certified Saudi doctor with a physical disability (poliomyelitis of the right leg, muscle weakness of the right lower extremity from the hip joint to the right foot with foot drop) to evaluate her experience and compare her educational journey as an undergraduate medical student in Saudi Arabia and as a resident in the United States. The result of the interview is displayed in Table 5.

Concerning her needs and the availability of special assistance during her education or special arrangements in the lecture hall or during examinations, she stated the following:

**Table 5** The Qualitative Interview Results with Saudi Physically Disabled Doctor About Her Experience as a Medical Student in Saudi Arabia and as a Resident in United States

<p><b>1. What type of disability do you have? Briefly describe your disability?</b></p> <p>Poliomyelitis of the right leg, muscle weakness of the right lower extremity from hip joint to the right foot with foot drop and lambing when walking.</p>
<p><b>2. Do you have relatives with similar disability?</b></p> <p>No relative with similar disability.</p>
<p><b>3. Did you need special assistance during your education? Was assistance available?</b></p> <p>No, I did not need special assistance during my education. The assistance was not available.</p>
<p><b>4. Did you need special arrangement when attending lectures? Was it available?</b></p> <p>No, I did not need special arrangement when attending the lectures. It was not available.</p>
<p><b>5. Did you need assistance or special equipment during you studies or extended submission date?</b></p> <p>Yes, I did. During my step 3 USMLE exam I could not know how it was schedule. I had neck pain due to disc herniation that is a complication of my spinal lordosis.</p>
<p><b>6. Did you envisage any activities during your studying program that you cannot attend because of your disability?</b></p> <p>Yes, I mentioned before.</p> <p>I was given six months extra to study for the American board of family medicine.</p>
<p><b>7. Did you need special arrangement and equipment or extra time for examination during your study?</b></p> <p>The special arrangement was not available. I was struggling in surgery and medicine rotation due to long standing time and the walking for long distance in the rounds.</p>
<p><b>8. What was the most difficult part during your study and work?</b></p> <p>Standing for long hours in surgery and walking for long distance in the round, and sometimes I was on call alone which was very difficult for me.</p>

(Continued)

Table 5 (Continued).

<p><b>9. What are the things that you wish they were available at the time you study?</b></p> <p>Paying more attention to the medical students with disability and provide their requirement to pass their studying years smoothly. Provide the golf cars for transportation between buildings. Allow them to take short breaks in the rounds and operation room. Provide seats in the first row for students with disabilities. Provide elevators, wider doors for the wheelchairs. Ramps instead of stairs. Accessible toilets for students with disabilities. Use of assistive technology</p>
<p><b>10. What are the differences between your experience in KSA and abroad?</b></p> <p>In America where I studied there were more consideration for my situation and my need. I did not need to walk for long distance. The round is done as a table round instead of walking between the patient's room for long time. I was allowed to leave the round whenever I feel tired. The heavy rotations are splitted over longer period. They choose closest clinic to the door for me to not walk for long. I was using a chair during the round. The disabled parking are always near the exits.</p>
<p><b>11. Did you regret it studying medicine?</b></p> <p>No I did not.</p>
<p><b>12. If your child is having disability will you agree for him or her to study in medical field?</b></p> <p>Not sure but her/his motive will emphasize the drive.</p>
<p><b>13. What are the things that can modify the lifestyle for disabled students in medical field?</b></p> <p>Mostly the facilities that can modify the life style of student with disability in medical field. Extra time to study and for the assignment. Short cuts and closer distance to the gates. Special equipment and wheelchairs. Seating area in the patient ward. Minimize the walking time and do table rounds.</p>
<p><b>14. Do you think medicine suits students with physical disability?</b></p> <p>Yes of course.</p>
<p><b>15. Do you think students with disability can study with other students without modification in the studying place?</b></p> <p>That will depend on the degree of the disability but in general students with disability need more modification to make their lives easier. Elevators instead of stairs, wheel chair ramps, appointed seats with easy access.</p>

I did not need special assistance or arrangement in attending the lectures during my education as assistance and special arrangements were unavailable. I was struggling in surgery and medicine rotations due to long-standing time and the walking for long distances in the rounds.

Concerning any extensions or exam modifications or to any activities during the program that she could not attend because of her disability, she said:

Yes, I only had it during my step 3 USMLE exam; I had neck pain due to disc herniation that is a complication of my spinal lordosis. Also, I had a six-month extension to study for the American Board of Family Medicine.

Concerning the things that she wished were available at the time of her undergraduate program, she stated:

They should pay more attention to the medical students with disabilities to pass their studying years smoothly. They should provide golf cars for transportation between buildings, allow short breaks in the rounds and operation room, front seats with easy access for students with disabilities, elevators, wider doors for wheelchairs, ramps instead of stairs, toilets for persons with a disability, and use of assistive technology.

Concerning the differences between her undergraduate program in Saudi Arabia and her experience abroad, she said:

They have more consideration for my situation and my needs. I did not need to walk for long distances. The round is done as a table round instead of walking between the patient's room or using a wheelchair during the round. I was allowed to leave the round whenever I felt tired. The heavy rotations are split over a longer period. They chose the closest clinic to the door so I would not have to walk for long. The parking for people with disabilities is always near the exits.

Concerning lifestyle modifications for students with disabilities in the medical field, she stated:



Mostly it is the facilities that can be modified, extra time to study and for the assignment, shortcuts and closer distance to the gates to minimize walking, special equipment, and wheelchairs.

Regarding whether she thinks students with disabilities can study with other students without modifications to the studying areas, she said:

That will depend on the degree of the disability, but in general, students with disability need more facilities to make their lives easier.

Finally, regarding whether she regrets studying medicine, if she thinks a person with physical disability cannot be a doctor, and if she would allow her child with a disability to study medicine, she stated:

No, I don't regret studying medicine, and this job suits people with physical disabilities with some modification. My child is free to choose and follow her/his dreams.

## Discussion

The present study examined the perception of the public, medical educators, medical students, and medical interns toward admitting students with disability to medical schools in Saudi Arabia. Furthermore, an interview was conducted with a female Saudi doctor with a physical disability for her to express her experience in comparison with how everyone else looks at the situation. Generally, the study results show that most participants welcomed the idea of a doctor with physical disabilities. Most participants believed that doctors' jobs are suitable for students with disabilities but that some modifications to the facilities, educational arrangements, and registration policies are needed. This matches the interview results. However, the question of working hours was also debatable, and most respondents were unsure if a doctor with a disability should be treated equally as a doctor without disability.

The quantitative survey results demonstrate a significantly favourable acceptance of students with disabilities in medical schools. The general public, medical educators, medical students, and interns concur on including individuals with disabilities in medical schools. This result is consistent with a prior study that found faculty members had a positive attitude toward students with physical disabilities but a negative attitude toward students with mental health and learning problems.<sup>14</sup> Moreover, a significant majority of the Saudi population expressed a willingness to be treated by a physician with a disability. Previous studies stated physicians with disabilities would have more empathy for patients who suffer from the same health issues by dedicating themselves to creating an accessible and supportive environment for patients.<sup>15,16</sup> For example, having hearing loss doctors may benefit patients who also have hearing loss.<sup>17</sup> The value of incorporating individuals with disabilities is underscored by their dual perspective, having experienced both patient and provider roles.<sup>18,19</sup> Consequently, admitting students with physical disabilities to medical schools may lead to better clinical results later.

The public and medical professionals think individuals with disabilities can successfully study in medical colleges and pursue careers as doctors. However, there is a noticeable absence of research on the acceptance of medical students and doctors with disabilities in Saudi Arabia. In 2021, the Ministry of Education documented 221,206 students with disabilities in 25 Saudi Universities without specifying the programs in which they were enrolled.<sup>20</sup> In contrast, a study comparing disability prevalence and accommodation practices between 2016 and 2019 revealed a 69% relative increase in disabilities among medical students in the United States.<sup>21</sup> In 2005, 2.86% of UK medical students reported having a disability when they joined medical school.<sup>22</sup> In turn, given the limited local availability of data, physicians and medical students with disabilities are encouraged to document their experiences and implement effective strategies, thereby creating successful models for others to follow.<sup>16</sup>

There was a consensus that specific medical specializations are appropriate for doctors with disabilities. These findings may be influenced by the participants' assumption that a doctor with disabilities cannot handle emergencies effectively, thereby endangering patient safety. McKee et al denied this assumption in their article.<sup>17</sup> They stated that emergency cases are typically handled by a health team rather than an individual health professional. Medical students with disabilities can also recognize their limitations and enhance necessary accommodations by participating in real-life



emergency scenarios during clinical simulations at medical school. Additionally, there was uncertainty about whether the typical working hours suit doctors with disabilities. In accordance with this finding, the qualitative interview findings offer a valuable viewpoint on the requirements of medical students and doctors with disabilities. Essential lifestyle adjustments, such as improved proximity to exits, specialized equipment, splitting the rotations over an extended period, and using assistive technology, are recognized as vital for enhancing the daily routines of medical students and doctors with disabilities. This perspective aligns with findings from Meeks et al, suggesting that the degree of modification required depends on the specific type and degree of disability.<sup>23</sup> Modifying examination parameters benefitted academic performance for individuals with impairments, highlighting the significance of customizing support measures to suit individual requirements. Thus, offering quality training and a flexible setting for medical students and physicians with physical disabilities can help them recognize their limits, overcome barriers, and achieve better outcomes.

Study participants highly supported implementing legislation encompassing doctors with disabilities in hospital settings. Fostering a safe and inclusive atmosphere in medical schools, wherein students feel comfortable revealing their disability, may positively influence the perception of professionals with disabilities. This emphasizes the need for fostering an inclusive atmosphere in medical education that addresses the unique needs of individuals with physical disabilities.<sup>24</sup> Madhesh highlighted the potential necessity for revising the entrance criteria of Saudi General Universities to promote more diversity.<sup>25</sup> Surprisingly, 64% of the surveyed universities in his study explicitly state on their websites that candidates must be “medically fit”, which potentially unintentionally excludes individuals with disabilities from equal opportunities in university education. The absence of official documents outlining comprehensive admission standards and criteria for medical students with disabilities is a significant concern. This is consistent with the interview results, emphasizing the importance of transparent processes for admission and revealing disability to provide an atmosphere where students can safely request accommodations without worrying about being mistreated.

The results emphasize the need to enhance awareness among Saudi graduates and highlight the significance of increasing awareness regarding the rights of individuals with disabilities. This aligns with a study conducted by Medhesh, which also suggests that the existing level of understanding of societal responsibilities towards individuals with disabilities is inadequate in terms of both quality and quantity.<sup>26</sup> In the literature, the group openly expressing their demands, referred to as the disclosure group, demonstrated a more positive assessment of their disability, resulting in a more fulfilling experience.<sup>27</sup> In addition, Alqarni et al have emphasized the significance of educating non-disabled students on how to engage with their peers who have disabilities.<sup>28</sup> They have also suggested the implementation of improved accommodations and establishing an environment that promotes effective and comfortable learning for students with disabilities.

Although the study offers valuable insights, it recognizes limitations, including the scarcity of prior research, inadequate documentation of experiences of medical schools in Saudi Arabia, and the absence of articles discussing improvements and the implementation of policies for individuals with disabilities, especially in the medical field and education. Including only one doctor with disability in the interview is recognized as a constraint, indicating the necessity for future research to encompass a broader array of participants and viewpoints. Furthermore, it is essential to research the difficulties encountered by individuals with disability in medical education, which include investigating their experiences in application, admission, graduating, and practicing as doctors. Revision of admission criteria, promotion of accessibility, clear accommodation rules, a supportive culture, and integration of disability awareness into the medical curriculum are also recommended for equal opportunities.

## Conclusion

This study assessed the perceptions of the Saudi population and medical students, interns, and educators regarding the inclusion of students with physical disabilities in medical schools in Saudi Arabia. Most participants express support for admitting students with disabilities and advocating for enhancements in facilities, services, and bylaws to accommodate them. Furthermore, an interview featuring a Saudi medical practitioner who has a physical disability sheds insight on the challenges that are encountered and the potential for enhancing services and facilities to optimize the capabilities of medical students and doctors with disabilities. The findings underscore the significance of assessing students with physical disabilities primarily based on their cognitive abilities rather than their physical disabilities. Finally, some

fears and misconceptions about admitting students with disabilities in medical schools can be overcome by providing high-quality education and the needed accommodations to suit them.

## Data Sharing Statement

All data generated or analyzed during the current study are included in this article.

## Institutional Review Board Statement

The Institutional Review Board of King Abdullah International Medical Research Center approved the study, Study Number: NRC21R/261/06, on August 3, 2021.

## Consent to Participate

All study participants consented and informed about the study's aim, objective, and right to withdraw at any point. Also, they were assured that all information would be confidential and used for research purposes only.

## Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis, and interpretation, or all these areas; took part in drafting, revising, or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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## Disclosure

The authors declare no conflict of interest.

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