Obstacles Faced by Students with Disabilities in Colleges due to the Lack of Inclusive Educational Frameworks in Pakistan

by

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Table of Contents

Declaration

I certify that this thesis, entitled *Obstacles Faced by Students with Disabilities in Colleges due to the Lack of an Inclusive Education Framework in Pakistan,* does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any university. To the best of my knowledge and belief, it does not contain any previously published material written by another person, except where due reference is stipulated within the text.

Saira Ayub

17 December 2021

Dedication

This dissertation is dedicated to my parents, who hold a special place in my heart and are honoured through all that I do in my life. Thank you, my father Muhammad Ayub, for teaching me critical life skills and for playing such an important part in my basic education and confidence building which have enabled me to overcome the many obstacles of my physical disability. Thank you, my mother Tahira Ayub, for motivating me to be honest, steadfast, and focused on my goals. Thank you both for always being there for me and supporting me in my academic and professional endeavours.

List of Abbreviations

CSS	Centre for Special Students
CRPD/UNCRPD	United Nations Convention on the Rights of PWDs
DPOs	Disabled Persons Organisations
GE	General Education
GEIs	General Educational Institutions
HEIs	Higher Education Institutions
HSCE	Higher Secondary Certificate Exams
IE	Inclusive Education
NEP	National Education Policy
NGOs	Non-government Organisations
NPA	National Plan of Action
PWDs	Persons with Disabilities or People with Disabilities
SE	Special Education
SEIs	Special Education Institutions
SWDs	Student with Disabilities
SWPDs	Student with Physical Disabilities
UNESCO	United Nations Educational, Scientific and Cultural Organization
WHO	The World Health Organisation

List of Tables

List of Figures

Abstract

This research explored the obstacles that students with physical disabilities at general colleges in the Punjab province of Pakistan encountered due to a lack of inclusive practices and strategies within the country's educational sector. Primarily focusing on the social model of disability, this study investigated the structural, attitudinal, educational, and system-wide barriers which limit the independence and learning opportunities of the students with physical disabilities. This research was carried out in the major cities of Punjab, which is the largest province of Pakistan and located in the north western part of the country. A large body of research has demonstrated that only an inclusive education system can achieve the quality learning outcomes for all children, including students with special needs, disabilities or impairments, and gifted students. However, establishing an inclusive learning environment within Pakistan's public educational system is difficult due to the prevailing institutionalised obstacles, including inadequate accessibility to buildings and facilities, lack of disability awareness amongst faculty, unavailability of assistive devices, and lack of suitable learning materials. The research methodology for this study was a sequential explanatory and mixed-method approach, in which data from quantitative online surveys and qualitative online interviews were gathered via convenience sampling. The interview data were analysed using phenomenologically crafted stories to link the experiences of the participants. In the first phase, data from 80 people were obtained from undergraduate students with physical disabilities, to understand the general obstacles they faced while participating in inclusive education within mainstream colleges. The second phase expanded on the first phase by conducting online interviews with two selected students. The final phase examined information across the data to interpret the comprehensive phenomenon of the study to enhance the accuracy of the research findings. The research revealed that the student

participants in the research experienced many barriers relating to inadequacies in infrastructure, mobility, attitudes, and access to public exams. There is limited access to basic amenities in colleges, and students experience difficulties in accessing transport which restricts independence and freedom to travel for learning. The study showed that the fundamental needs of the students have been neglected, primarily due to a lack of awareness about disability issues in the society. Moreover, female students with disability face the effects of multiple discrimination due to the intersection of disability and gender, which results in mobility and health issues causing interruption to their education. Weaknesses in the legal framework, poor monitoring systems, and the disconnect between ministries are significant system-wide obstacles to implementing inclusive policies in Pakistan. Future research should focus on the experiences of students with visual and hearing disabilities and on inclusive education practices in colleges located in small communities and remote areas.

1. Introduction

1.1 Background

I am interested in exploring the obstacles faced by students with physical disabilities (SWPDs) due to a lack of inclusive practices and strategies in the education sector in Pakistan. In my study, I specifically focus on the social model of disability, which emphasises that disability and its associated problems result when society has failed to provide necessary supportive services and proper adjustments for individuals with disabilities (Monday & Mogom, 2016). This study investigates the structural, attitudinal, educational, and system-wide barriers which limit opportunities for SWPDs who are currently or have previously studied at mainstream or general colleges in the Punjab province in Pakistan.

1.2 Background of the Study

In South Asian countries, such as India, Bhutan, and Pakistan, there are many cultural myths about disability. There is a belief that disability results from karma, which regards PWDs as having committed sins in their previous life and consequently undergo suffering in their next incarnation (Kamenopoulou & Dukpa, 2018). Many parents hide their disabled children from the public as disability is considered a punishment for their parents' sins. In contrast, some parents think it an honour to serve or attend their disabled children and therefore avoid integrating them into society independently. They prefer to push their

wheelchair or move them rather than let the disabled child do it themselves. In this manner, the family structure can be a primary obstruction for persons with disabilities to become independent, functioning members of society (Rathore et al., 2011). As a result, person with disability become a burden for both family and community.

According to the Japan International Cooperation Agency (JICA) report published in 2002, persons with disabilities are considered the most marginalised group of society in Pakistan. That marginalisation exists for several reasons, including a lack of legislative frameworks for inclusion and little significant information about rehabilitation centres and specialised services. Federally, the Ministry of Women's Development and the Ministry of Social Welfare and Special Education have the authority to make policies for the welfare of PWDs explicitly focusing on education, employment, and rehabilitation. However, grass-roots implementation of these policies is the responsibility of the provincial and district governments which do not consider the welfare of PWDs as a priority. Furthermore, there is no specific department at the provincial and district levels to monitor and ensure policy implementation. Therefore, PWDs are often denied many services and rehabilitation programs (Caceres et al., 2010).

In Pakistan, at primary, middle and high school levels, there are two education systems for Students with Disabilities (SWDs): Special Education (SE) and General Education (GE). However, at secondary and tertiary education levels, SWDs can only study in GE institutions. Special Education institutions provide facilities for all disabilities, including physical impairment, hearing impairment, visual impairment, and intellectual impairment. In the concept of the SE system, appropriate curricula and services are available to meet the fundamental needs and abilities of SWDs, and some schools also provide programs for gifted students, who may not readily adjust to regular schooling. However,

only SWDs are accommodated in these SE institutions within Pakistan (Ahmad & Yousaf, 2011). The SE system is often criticised for its low-quality curriculum and its poor delivery in the classroom, making it a sub-standard education that is, nonetheless, justified by the government and school authorities based on the low priority given to SWDs. Furthermore, the effectiveness of SE in Pakistan is hindered by discriminatory and stigmatising beliefs of SE teachers and parents, and the attitudes of a large sector of society which regards the education of SWDs as unimportant given the prevailing opinion that they can achieve little academically or professionally (Hameed & Fazil, 2012).

An education system that achieves the basic needs of all children, including SWDs and gifted students, is an Inclusive Education (IE) system. Inclusivity in education acknowledges basic human rights, and focuses on the need to provide a high-quality education for all students, regardless of their diversifications (Moriña, 2017). In the case of SWDs, IE helps them adjust to a society with dignity and respect and supports them in achieving economic empowerment, which can reduce the dependency of SWDs on others. It is an important method for SWDs to improve their quality of life and expand their professional capabilities. Through education, SWDs can gain employment opportunities, earn a decent wage, and live an independent life (Ahmad & Yousaf, 2011).

The 2009 National Education Policy (NEP) in Pakistan endorses the right of every child to be educated and encourages an inclusive education system, with a focus on accommodating students and their diversities to enhance their participation in regular classrooms. However, in reality, the NEP has had little effect in the implementation of IE principles or in achieving a truly inclusive classroom environment for SWDs. In Pakistan, the IE system could be successful if it had a welcoming and accessible learning environment that ensured inclusion for all children in mainstream institutions (Khan et al., 2017). Therefore, to implement inclusive education in Pakistan, policy makers should consider

three fundamental issues: firstly, establishing an acceptable definition of IE; secondly, giving some consideration to the roadmap for how IE might be implemented and; thirdly, redefining the roles of GE and SE (Hameed & Fazil, 2012).

1.3   Personal Narrative

Due to my muscular dystrophy disability, I have fought all my life to be an average person. I began my studies in mainstream schools and colleges of small cities of the Punjab province, where the structure of the buildings was not disabled-friendly. In these institutions, access by wheelchair to basic amenities, such as toilets, canteens, sports grounds, staff rooms, and the head teacher rooms was difficult if not impossible. If classrooms and examination centres were located on the second floor, lifting my wheelchair became an arduous task due to the lack of a lift or elevator. Moreover, administrators, teachers, and classmates had no idea how to accommodate a student with such a disability, since it was unusual for someone like me to be attending classes. As a result, life has thrown many challenges at me, but I surpassed them all with sheer determination. With that determination, I graduated in economics from Lahore College for Women and began my career as a lecturer in the Government College for Women Baghbanpura Lahore. Thus, for the past 15 years, I have been an Assistant Professor teaching economics and also serve as the provincial coordinator of the National Forum of Women with Disabilities.

With my background as a student with disability, a teacher in a mainstream institution, and an advocate of the rights of persons with disabilities, the research focus of this study is very close to my heart. As an inquisitive person, I have chosen to investigate the physical, attitudinal, educational and policy obstacles faced by SWDs in colleges due to the lack of an inclusive education framework in Pakistan. I believe that my life experiences with a disability and my knowledge of the education system in Pakistan lend personal insight

to my study and enable me to reflect on the data, analysis, and findings, as well as the lives of the participants, from a perspective that will inform and enrich the outcomes from this research.

1.4 Statement of the Problem

The World Health Organization (WHO, 2011)) and World Bank report that between 120 to 150 million children under the age of 18 years have a disability and encounter challenges acquiring an education in many countries due to a lack of legislation protecting their human rights (Milic Babic & Dowling, 2015). It is my personal experience that for SWDs, a supportive environment at home and in school is required to minimise barriers to education. To create an inclusive environment for SWDs, accessible educational buildings, skilled teachers, access to assistive devices, and accessible learning materials are preconditions. The availability of significant resources and fundamental reforms are required to design inclusive education systems that would equitably benefit all children (Sæbønes et al., 2015; Stubbs, 2008). However, many countries do not have the resources, knowledge, or legislative structures to accomplish this important task.

The United Nations (UN, 2006) Convention on the Rights of Persons with Disabilities (CRPD) acknowledges the right of SWDs to an inclusive education. To include SWDs in mainstream institutions, it is essential to remove all barriers for IE and make sure there is a provision of support services. Without IE, countries that are signatories to the UNCRPD may not fulfil their responsibilities under Article 24 and may not achieve the goal of education for all (World Health Organization, 2011).

The African Peer Review Mechanism Country Report for Nigeria (2008, as cited by Monday & Mogom, 2016), which is also relevant for Pakistan, revealed that SWDs were not being included within mainstream educational institutions. Primarily, this was because

teachers were not provided with educational materials, facilities, and skills, all of which are prerequisites in the education of SWDs. My own experience is that stairs, narrow doorways, and inappropriate seating arrangements in classrooms of General Educational Institutions (GEIs) are challenging for students with wheelchairs. In some instances, if these physical barriers are not effectively dealt with, they can contribute to mental welfare issues for SWDs. With such challenges to overcome, it can be difficult for SWDs to utilise their knowledge and capabilities to achieve good academic performances. Furthermore, the lack of relevant, inclusive policies, discriminatory behaviours towards SWDs, and neglect of their right to education are significant obstacles for them in accessing educational institutions (Khan et al., 2017).

Therefore, the primary purpose of this study is to utilise a social model of disability to investigate the existing challenges for SWDs in Pakistan, especially at the college-level entry, and to imagine what might be needed to move to more inclusive and effective policies that can overcome the barriers to their education.

1.5   Significance of the Study

This study is significant in that it aims to uncover some of the actual, grassroots, and on-the-ground implementation issues affecting inclusive education in Pakistan. The issues hindering the effective introduction of inclusive education in the country form a significant problem that prevents Pakistan from meeting its human rights obligations and achieving a quality education for all children. Primarily, these issues arise due to a lack of awareness, understanding, and information exchange amongst significant stakeholders in the education sector about disability issues generally and specifically in terms of action. These stakeholders include administrators, teachers, parents, and student-peers. However, there are also significant issues for PWDs in Pakistan arising from under-resourcing of education

programs, poor accessibility in education environments, lack of facilities such as assistive devices, and lack of training of faculty in delivering inclusive education. The significance of this study, therefore, is that it provides a research-based understanding of the barriers in mainstream colleges faced by SWDs in Pakistan, which may help inform government policy and implementation, and may assist in providing a baseline informing further research on inclusive education in the country.

1.6   Objectives of the Study

The study has two main objectives. The first is to identify the structural, attitudinal, and educational obstacles undergraduate students with physical disabilities face due to lack of inclusive practices and strategies in mainstream colleges. The second objective is to explore the strategies and actions in use for the inclusion of students with disabilities in mainstream colleges. This process involves examining inclusive education procedures in Pakistan and comparing practices in some other countries.

1.7   Research Questions

The research questions this study sought to answer are:

1. What are the main obstacles faced by physically students with disabilities in colleges due to the inadequacy of an inclusive framework in Pakistan?

2. How might a framework of inclusive learning be imagined at the grassroots levels in colleges?

1.8   Research Gap

Numerous studies have been conducted globally in the research area of inclusive education and the importance of a quality education for SWDs. For example, Alqaryouti (2010) examined the problems of Omani higher education students with physical and visual

impairments in inclusive classrooms. The study results indicated that students with visual impairments faced more learning, structural, and social interaction barriers than students with physical impairments. Vickerman and Blundell (2010) investigated the viewpoints of 504 students with disabilities from one UK higher education institution through a survey questionnaire and face-to-face interviews. The study identified the importance of five key actions which would enable UK higher education institutions to be more accessible: pre-course training program, consultation with SWDs, establishment of personal development plans, and institutional commitment to develop support services and barrier-free curriculum for SWDs.

Although the body of literature on the topic of inclusive education and the obstacles faced by SWDs is extensive, only a few studies have been conducted in Pakistan. For example, Farooq (2012) focused on the structural, attitudinal, and educational factors, which became obstacles for SWDs in the GE schools of Lahore. Through a survey, evidence was gathered from SWDs, their parents and teachers. Khan et al. (2017) also investigated attitudinal and learning practices for SWDs in GE primary schools, acquiring data from teachers of Islamabad, through a structured questionnaire and interviews. However, both studies neglected to identify obstacles related to inclusive policies and practices in Pakistan and their studies were based in single-city population samples. Furthermore, Safder et al. (2012) explored the difficulties of university-level hearing-impaired students in an inclusive classroom. However, the focus of the study was on educational barriers. Ghouri et al. (2010) explored the behaviours of school principals and teachers towards inclusive education in GE schools from Karachi, Pakistan. That study focused on attitudes and the availability of resources to enable the inclusion of SWDs in regular schools. The focus of these studies was GE schools and university level. However, they did not examine the barriers for SWDs in

colleges and their sample populations were from relatively limited locations rather than more widely considering the issues across multiple situations in a selection of city populations and different school districts in Pakistan. Therefore, this narrow focus of previous research in Pakistan represents a gap in the research literature which this study sought to fill.

This study examines the structural, attitudinal, and educational challenges faced by SWPDs in colleges of Pakistan, which is an under researched area of knowledge in the literature. A college is an institution smaller in size than a university and offers an undergraduate degree only. All colleges provide intermediate programs along with a two-year Bachelor's degree program. Some colleges in Pakistan offer four-year Bachelor's degree programs, and some also offer Master's degrees. Furthermore, the participants in this study's questionnaire originated from a number of colleges located in the major cities of Punjab province, being Islamabad, Lahore, Multan, and Rawalpindi, which enabled the research to reach a broad sample of the population representing diverse backgrounds and geographical locations. Therefore, the study helps to fill a gap in the literature and may provide a base for further study of these issues across other regions of Pakistan.

1.9 Methodology

This study follows the sequential explanatory mixed-method approach (Creswell, 2015; Creswell & Creswell, 2017; Hesse-Biber, 2010), in which both quantitative survey and qualitative interview data were collected and analysed. The richer sources of information were combined and cross-referenced using the triangulation method which assists in comprehensively and broadly understanding the phenomenon of inclusivity in the Pakistan context (Heale & Forbes, 2013). In the first phase of this study, the data were collected from SWPDs using questionnaires to understand general obstacles concerning IE. In the second

phase of this study, in-depth interviews were conducted with two SWPDs to discover their perceptions of inclusive education in the education system of Pakistan. In-depth interviews can help to verify and explain the results of more broadly-based data gained from questionnaires and surveys (Creswell & Creswell, 2017).

1.10   Limitations and Delimitations

Due to time constraints, the restricted research location, and word count restrictions, the scope of this study was somewhat limited. Data were obtained from the major cities of the Punjab and therefore did not investigate obstacles faced by SWDs studying in small towns and remote areas of the country. The survey data were collected only from SWPDs and did not investigate other disabilities, such as students with visual, hearing, and intellectual impairments. Furthermore, the study only gathered data from SWDs attending colleges and did not investigate issues faced by students in universities or non-tertiary schools. Therefore, the results of the study may not be applicable or generalisable in other contexts or locations.

1.11   Ethics

In the first stage of the research, participants were students with physical disabilities who were currently or had previously studied at public, private, or autonomous colleges in Pakistan. In the second stage of the research, the participants were SWPDs and representatives of Disabled Persons Organisations (DPOs). Therefore, ethics approval to conduct research on human subjects was sought and obtained from the Flinders University Human Research Ethics Committee (Project No. 4090, see Appendix A). Participation in the questionnaire was acknowledged as the required form of consent. In contrast, participation in the interview involved the participants completing a signed consent form emailed before

the interview, but after participants had received the letter of introduction and information sheet.

1.12 Chapter Summary

In this chapter, I have outlined the myths surrounding disabilities and the reasonings for the marginalisation of people with disabilities in Pakistan. I described how, although the Pakistani government has committed to policies that promote inclusive education for PWDs, they are in effect excluded from GE and face many obstacles in GEIs, including colleges. This problem, therefore, forms the focus of the study and the questions it has sought to answer. The next chapter reviews the literature by comparing the disability models in practice globally, different educational approaches for SWDs in use in other countries, IE principles, and development of inclusive policies in Pakistan.

2. Literature

2.1 Literature Review and Conceptual Foundations

According to the Convention on the Rights of Persons with Disabilities (CRPD), "Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others" (United Nations, 2006, p. 4). The International Classification of Functioning (ICF), Disability and Health, defines disability as an umbrella term for impairments in body functions, such as blindness, hearing loss, and physical limitations, which restricts daily life activities. It involves an individual's health condition and their contextual factors as these relate to environmental and personal factors (World Health Organization, 2013). Worldwide, persons with disabilities are often deprived of their rights to a range of opportunities, including education, employment, health care, and even political participation. Moreover, PWDs often experience discrimination, threats of violence, neglect, and disrespect. Due to their vulnerability and marginalisation, PWDs are often stigmatised and treated with prejudice by society which diminishes them and their capabilities as individuals because of their disability (World Health Organization, 2011). Thus, the conceptual foundations of disability in society are defined by the inequality and adversity that PWDs experience in many aspects of their lives, and by the attitudes of others toward them and different models that have been applied over history to explain the disability condition.

2.2 Two Models of Disability - Medical and Social

The medical model of disability embodies an outdated perspective on disability as an 'individual problem' for the person affected rather than relating to inadequacies or inequities in society and environment (Moriña, 2017). According to Neufeldt (1995), the medical model of disability primarily focuses on loss. The disability is considered a dominant characteristic of the person and as a shortcoming. The model describes disability as a natural tragedy, and all challenges encountered by PWDs are the result of their disability. The model has a narrow focus and implies a state of dependency for them (Monday & Mogom, 2016).

In contrast, the more recently evolved social model of disability concentrates on barriers or hurdles as characteristics of society, which PWDs regularly face while participating in daily activities (Baron et al., 1996). Disability is not regarded as a personal tragedy in the social model, and there is no need to treat it as if it were a disease. Barriers arise in the form of discrimination and oppression. In overcoming these barriers, there is a need to restructure society's practices, behaviours, and policies, which are generating many of these barriers (Moriña, 2017). Therefore, the social model includes more comprehensive concepts, including an understanding of the need for accessibility of infrastructure and human environments, disabled-friendly transport systems, inclusive education and workplaces, anti-discrimination legislation, and political participation for PWDs (Monday & Mogom, 2016).

The medical model of disability emphasises the abnormal conditions of the individual as a weakness in their characteristic which it regards as responsible for the hurdles faced by disabled people. In contrast, the social model of disability emphasises the structural and social barriers in the environment of any society (World Health Organization, 2011).

The medical model of disability portrays people with disabilities as having abnormalities that need to be corrected, whereas the social model sees disability as only a part of the person and an entirely natural aspect of any diverse community of people. This perspective helps society and authorities to recognise and remove the barriers that make the life of people with disabilities difficult and dependent. Therefore, by removing those barriers, equality, independency, and accessibility for PWDs can be enabled, eliminating the disadvantage and marginalisation caused by their disability.

2.3   Different Educational Institutions

There are generally three different approaches to providing education for SWDs: special institutions, integrated institutions, and inclusive institutions. In certain institutions, the curriculum, facilities, and instruction are dedicated to students with specific impairments, such as applied in schools for blind students or schools for hearing-impaired students or for intellectually impaired students. Often this practice results in the individual student's exclusion from mainstream institutions where learning and development are enhanced by the diversity of interactions and exposure of students to a broad range of social and intellectual contexts.

In integrated schools, separate classes are constructed for SWDs in mainstream institutions, where pupils with disabilities still receive an education, albeit in a segregated environment. The integrated approach has advantages over an institution dedicated solely to specific disabilities in that integration includes greater opportunity for interactions among a diversity of students, as would naturally occur in society more broadly, and allows efficiencies in facility and faculty resources.

However, in inclusive institutions, the advantages of an Inclusive Education (IE) are superior in that barriers to socialisation and learning opportunities for pupils with disabilities are removed. Moreover, the inclusive approach helps to ensure the provision of equitable facilities, environmental conditions, and standard of education by including SWDs in regular classes with their same-age peers in mainstream institutions (World Health Organization, 2011).

In Pakistan at primary and secondary school levels, there are two types of educational institutions. General Educational Institutions (GEIs) cater to all students irrespective of their particular needs. Special Educational Institutions (SEIs) exclusively accommodate students with special needs. However, the SEIs are available only in large cities, while the GEIs are located everywhere in cities, towns, and rural areas (Farooq, 2012). The effectiveness of this system of providing primary and secondary education for disabled children has been criticised as inadequate and inequitable. For example, in GEIs, SWDs may be discriminated against or find the general education curriculum and learning too difficult. Thus, they are more likely to leave the institution early and achieve a lower level of education than SWDs who attend SEIs (Neufeldt, 1995).

2.4 Inclusive Education and its Principles

There are three approaches to integrating disabled people into any society. These include global sharing of excellent practices, a suitable legal and legislative framework to enable these practices, and an extensive awareness campaign to assist social change through education and media platforms. Arguably, knowledge and policy must be supported by public education and the media, which can be instrumental in opening up this process of integration of PWDs in society and bring about positive change (Siska & Habib, 2013).

31

Inclusive education is a fundamental human right of children with disabilities because it promotes the same level of education among all children, regardless of their abilities. According to Ainscow (1994), inclusive schools offer equal opportunities and chances of full participation for children with disabilities and their teachers, families, peers, and volunteers. Moreover, Bartolo (2003, as cited by Ghouri et al., 2010) states IE is the full-time integration of proper support and adjustments for students with disabilities in general and mainstream institutions.

According to UNESCO (2009), three main reasons exist to develop an inclusive education system for children with disabilities. These are for educational, social, and economic reasons. An inclusive education system can educate all children and is beneficial for all because it responds to their needs. Inclusivity in education can help improve behaviours and attitudes toward disabilities, help to normalise disability as simply a part of a society's diversity, and help to improve integration of PWDs in the community. In terms of the economy, an inclusive education system can help the financial sustainability of scholarly institutions where all children can receive the same level of education. For example, a well-designed inclusive academic system could be less costly than to develop multiple types of schools for particular disability groups. Moreover, inclusive schools are more financially viable due to economic efficiencies, reducing duplication of facilities, and better utilisation of faculty resources (World Health Organization, 2011).

A significant aspect of the academic discussion in the education literature about the integration of SWDs into public institutions is that it tends to target *students* in General and Special Institutions rather than the integration of the *systems* of General and Special Education. According to Voltz et al. (2001), the concept of IE brought new stimulus to rebuild GEIs to provide support and assistance to SWDs for learning in GEIs. Designing a

proper physical environment is an important principle of IE to accommodate SWDs in a classroom. Inclusion does not only mean a physical space, but also involves acceptance and a sense of belonging in GEIs. Inclusion implies active participation of SWDs in daily classroom activities through meaningful learning activities and peer relationships. In an IE system, the faculty works as a team to fulfil the needs and maximum potential of SWDs. In an inclusive classroom, a teacher can use a wide range of instructional strategies, such as cooperative learning activities, centre-based instructions, and learner-centred activities, to involve students in a diversity of individual and group learning experiences. By ensuring a safe and hospitable educational setting for SWDs, there is opportunity for teachers and peers to promote an understanding and respect for difference and diversification among students (Voltz et al., 2001). Collaboration among SEIs and GEIs in the form of cooperative teaching or co-teaching to develop problem-solving strategies, a supportive resource program, and instructional assistants is essential for the promotion of IE in higher GEIs (Ashfaq & Rana, 2015).

2.5 Demographics

Although more recent data are not available, according to the 1998 population census, 2.54% of Pakistan's population identified as disabled (Farooq, 2012). This figure is unlikely to reflect the true nature of disability in the country today. The Population and Housing Census conducted in 2017 showed the total population of Pakistan to be around 207 million people. The World Health Organization (2011) estimated that global disability is 15% of the worldwide population. These estimates then suggest that approximately 31 million people in Pakistan may have some level of disability (Rathore & Mansoor, 2019). Consequently, disability is a significant factor in the country's social, developmental, and economic structures which deserves higher priority consideration than currently is being

given to the welfare, education, and employment of PWDs who it should be recognised can contribute to the national economy and to society more generally.

2.6   Inclusive Legislation/Policies in Pakistan

In 1981, the Government of Pakistan announced the first legal order for rehabilitating people with disabilities, which was founded on the medical model of disability. After a long gap, the first decade of the twenty-first century proved to be a milestone in the disability movement of Pakistan. During the past decade, the Government of Pakistan has promulgated comprehensive policies which have adopted the social model of disability, such as the National Policy for PWDs (2002), National Plan of Action (2006), Special Citizen Act (2008), and the Special Citizens (Right to Concession in Movement) Act (2009). Finally, the ICT Right of Persons with Disability Act, (2020) was promulgated by the National Assembly for the inclusion and development of persons with disabilities. After ratifying the CRPD in 2011, all stakeholders of the disability movement in Pakistan now have a clear path for a comprehensive legal framework.

Disabled Persons (Employment and Rehabilitation) Ordinance, 1981

The Disabled Persons (Employment and Rehabilitation) Ordinance, 1981 was the first law passed by the Government of Pakistan, after the declaration of 1981 as the Year of Disabled People. Under this ordinance, the National Council and Provincial Council were established to formulate policies for the employment, rehabilitation, and welfare of disabled people in Pakistan. Furthermore, a one per cent quota was allocated to the employment of disabled people in public and private organisations, which was then later increased to two per cent (Disabled Persons, 1981). Although the ordinance followed the medical model of disability, which regarded the disability as limiting a person's functioning in society, under this ordinance, Special Education was endorsed. Therefore, the ordinance represented a

cornerstone and a step forward for the inclusion of disabled people in education and mainstream society.

The National Policy for Persons with Disabilities, 2002

After a long consultative process with the relevant stakeholders in the disability sector, the Government of Pakistan finalised the National Policy for Persons with Disabilities in 2002. The stakeholders were NGOs and Federal Ministries, including Labor Manpower, Health, Housing and Works, Science and Technology, and other relevant departments (Ahmed & Khan, 2011). The main goal of the National Policy for Persons with Disabilities was to empower persons with disabilities in all spheres of life by ensuring legislation and providing access to medical facilities, education, social life, employment, and rehabilitation. The main areas of focus of the national policy document are prevention of disabilities, the adaptation of a shift from exclusive to inclusive education, vocational training program, employment, and rehabilitation. Furthermore, advocacy and awareness, sports and recreation, accessibility of buildings, institutional mechanisms, funding and monitoring are highlighted sections of this policy document (National Policy for Persons with Disabilities, 2002). Thus, the National Policy for Persons with Disabilities shifts the paradigm of disability from the former medical model to the new social model. It also provides a guideline to relevant stakeholders for the empowerment of persons with disabilities across the country.

National Plan of Action (2006)

The National Plan of Action (NPA) recommends the functioning process of the National Policy for Persons with Disabilities. It suggests short and long-term objectives for the inclusion and development of disabled people in all spheres of life. The main targeted areas of NPA are prevention of disabilities, legislative support to PWDs, social mobilisation,

capacity building, awareness, promotion of inclusive education and vocational training, accelerating medical rehabilitation services, and creation of a barrier-free physical environment (Ahmed et al., 2011). The NPA specifies time frames for completing the targeted objectives and assigns the roles and responsibilities to various departments.

Special Citizen Act, 2008

Special Citizen Act 2008 focuses on promoting an accessible environment to persons with disabilities by allocating seats for them in public transport and providing access facilities on footpaths, especially for physical and visual impaired persons. Under this act, it is the responsibility of the Government to assure access facilities for wheelchair users before the construction of buildings in public and private sectors, especially in educational institutions, hospitals, banks, shopping malls, airports, police Stations, and Hotels (Gul, 2020).

Special Citizens (Right to Concession in Movement) Act, 2009

Through the Special Citizens (Right to Concession in Movement) Act, 2009, the concerned authorities are obliged to provide half-fare charges to PWDs in public and private transportation. Under this act, transportation infrastructures now would charge concessional rates for PWDs which provided some financial relief and improved accessibility of the transport system (Ahmed & Khan, 2011).

United Nations Convention on the Rights of Persons with Disabilities 2006

In 2006, the UN General Assembly endorsed the United Nations Convention on the Rights of Persons with Disabilities. Subsequently, by 2017, 174 state parties had ratified the CRPD, including Pakistan which ratified in 2011. Thus, Pakistan along with other nations was obliged to ensure the enforcement of the CRPD articles and promote the full realisation of the rights of PWDs by developing local legislation and practices according to the

convention (Gul, 2020). Article 24 of the CRPD ensures the rights of PWDs to inclusive and equitable access to quality education at all levels.

The ICT Right of Persons with Disability Act, 2020

After ratifying CRPD in 2011, primary stakeholders of the disability movement in Pakistan had a clear direction for local-level legislation. These stakeholders are Disabled Persons Organizations, Non-government Organisations (NGOs), International Non-government Organisations (INGOs) and public representatives. After lengthy lobbying and advocacy, the ICT Right of Persons with Disability Act, 2020 was passed by the National Assembly of Pakistan to promote, protect, and effectively ensure the inclusion of PWDs in all spheres of life. The Act follows a human rights-based disability model which acknowledges the rights to inclusive education, employment, health and medical services, independent living, home and family, political participation, ownership of property, and justice for PWDs. An executive authority, the Council on Rights of Persons with Disabilities, was established to assist the government ministries and departments in developing a legal framework to achieve the objectives of the Act (National Assembly Pakistan, 2020).

Inclusive Education Policy (2019)

The Higher Education Commission (HEC) 2019 promulgated a policy to accommodate students with disabilities at Higher Education Institutions (HEIs) in Pakistan. The main features of that policy are the provision of a special allowance to SWDs, removal of physical and behavioural barriers, provision of guidance and counselling to students with special needs and, finally, creation of awareness regarding disability issues in HEIs. Furthermore, the policy also established a quota in admission, disability-services related information, adaptable curriculum, availability of exceptional tutors and appropriate modes of assessment and examination (Higher Education Commission, 2019).

Despite these progressive initiatives by HEC, many factors became stumbling blocks for implementing the policies, which required long term planning and many practical actions. There was a need for a proper mechanism and implementation framework at national, provincial, and district levels to bring positive changes in the livelihood of PWDs at grassroots levels. Otherwise, these policies would become words on documents only and not effectively benefit PWDs.

2.7   Chapter Summary

This section reviewed the literature and the academic discourse on the disability models, the different educational approaches for SWDs, the principles of IE, and the development of human rights and inclusive policies and legislation relating to disability in Pakistan since the 1980s. Although much has been accomplished in terms of policy and legislation, it is clear that there is still a need for a proper mechanism for the execution of these policies so that PWDs may benefit more fully from the initiatives. The next chapter focuses on the methodology of this research and the two phases of research on which the study was based.

3. Methodology

3.1 Research Design

Research design in a study illustrates a flexible set of assumptions and observations having a specific background that connects theoretical ideas to a committed inquiry strategy supported by methods and techniques to collect empirical information. Therefore, an essential task for me as a researcher was to connect the three "building bricks" of the research design: theory, methodology, and research question (Jonker & Pennink, 2010). From problem to answer, I formulated a research pyramid having four levels, as recommended by Jonker and Pennink (2010). The first level was the research paradigm, where I viewed the *reality* of medical and social models of disability. The second level was the research methodology; I found the *way* to research by applying the explanatory sequential mixed-method approach. Through the third level of the research method, I executed the quantitative analysis in the first phase and the qualitative research in the second phase of the study. The fourth level of the pyramid was the research technique; I used a survey questionnaire and interviews to collect and analyse the data (Jonker & Pennink, 2010).

Methodology

The research method for my study was an explanatory mixed-method approach, in which both quantitative and qualitative data were collected and analysed. The basic assumption for using a mixed-method system was that those quantitative and qualitative methods, in combination, would provide a better insight into the research problem. Therefore, I chose the sequential explanatory mixed-method approach, which was systematic and planned (Creswell & Creswell, 2017). The rationale for the mixed-method system was that the quantitative results would present a general picture of the research

problem, and then the qualitative data would be needed to refine the general concept (Subedi, 2016).

Triangulation

The primary justification for using the sequential explanatory mixed method was the triangulation, where findings of the first strategy were cross-referenced against the results of the second strategy of the research (Bryman & Bell, 2011). Usually, triangulation is implemented to understand the phenomenon of a study more comprehensively and to enhance the rigour and accuracy of a research study (Heale & Forbes, 2013). I used methodological triangulation by applying two approaches to collect richer data and confirm my research results (Wilson, 2014).

There are three outcomes of triangulation that may result from combining both quantitative and qualitative approaches to answer a specific research question. The first outcome is that the results may be convergent to the same conclusion. The second outcome is that the results may be different but used to complement each other, and the last development relates to the results being divergent or inconsistent (Heale & Forbes, 2013). Therefore, convergent results from triangulation reinforce and support a study's findings, increase the validity through verification, and make them more acceptable by using qualitative and quantitative strategies (Hesse-Biber, 2010). By combining two levels of design in the sequential explanatory mixed approach, the quantitative data were collected first, followed by qualitative data. The sequence decision was QUAN→qual, which means the primary data collection process was the collection of quantitative data was initiated before the qualitative data. Here the collection of qualitative data played a secondary role (Bryman & Bell, 2011).

3.2   Data Collection Process

Quantitative Data Collection

In the first phase of my study, I collected data from SWPDs to understand general obstacles they faced in IE. This quantitative data helped me understand general trends and patterns in the population (Bowen et al., 2017). In that phase, my role was from behind the desk, creating a picture of the phenomenon in review. My *box of bricks* in that phase was a closed online survey questionnaire (Hesse-Biber, 2010).

Piloting of the Online Survey Questionnaire

I used the web-based questionnaire Qualtrics to collect data. A pilot study was developed to test the reliability and validity of the survey questionnaire before distributing it, which is a technique to make changes in the instrument based on feedback from a small number of respondents who assessed the mechanism (Creswell & Creswell, 2017). The main objective of the pilot study was to improve the quality and efficiency of the questionnaire. Piloting the survey was undertaken with ten undergraduate students with physical disabilities from the potential participant pool.

Launching Online Survey

In the first stage, following the approval from Flinders University's Human Research Ethics Committee, an online survey was distributed to find out more about the experience of undergraduate students with physical impairments from colleges across Punjab province. In response to the study, 80 people replied. The 5-point Likert scale surveys were distributed via selected DPO's and online forums of persons with disabilities through a flyer (see Appendix B). The online forums where students with physical disabilities had access were Disabled Persons Pakistan and Persons with Disability (PWD) groups.

Survey Questionnaire

An electronic survey was utilised to measure, observe, or document the data in the first phase (see Appendix C). Primarily, the form was used to identify trends in attitudes or characteristics of a phenomenon from a large sample of people representing the population (Creswell & Creswell, 2017). The electronic survey information sheet explained for participants the purpose and nature of the research, participation criteria, potential risks, confidentiality, and research ethics. The survey questionnaire had two parts. In Part A, demographic profiles were sought. In Part B, experiences of any personal disability obstacles at the college level were requested. These obstacles were then separated into structural, attitudinal, and educational barriers. Most of the survey questionnaire elements were adopted with some modification from Farooq (2012) and Zahid et al. (2018).

Qualitative Data Collection

In the second phase of my study, to extend the results of the first phase, I conducted two interviews with selected SWPDs, who were also representatives of Disabled Persons Organizations. These DPO's were initiated by PWD's and committed to empowering disabled individuals and improving awareness and sensitivity of society about the rights of PWDs. In this phase, my box of bricks was semi-structured interviews, and my role was to know reality through 'the eyes of someone else' (Hesse-Biber, 2010). The in-depth interviews were about 60 minutes in duration. The semi-structured interview had two parts. In Part A, a demographic profile was requested from the SWPDs. In Part B, answers to open-ended questions were sought, which would help to understand the barriers and accessibility framework of inclusive learning in colleges (see Appendix F). To ensure the confidentiality and anonymity of the research participants, I used pseudonyms to refer to the study participants while writing the research findings and reported as P1 and P2 and the college name where they studied as the PW College (for P1) and the AU College (for P2).

These recorded in-depth interviews were then transcribed and shared with the participants to check for accuracy and any required changes before the data were analysed. The respondents' perceptions helped me generate new knowledge, and the findings from the qualitative data assisted me to understand the context of the study.

Sampling

The research was conducted in two stages. Firstly, the convenience sampling method was applied to collect data. In this sampling technique, I selected those participants who were willing and available to be studied. In this case, I was uncertain whether the individuals were representative of the population. However, the sample could provide helpful information for answering questions (Creswell & Creswell, 2017). Only SWPDs who were currently studying or previously studied in public, private or autonomous colleges were eligible to complete and submit the electronic survey. Public colleges are operated under the supervision of the Government Higher Education Department. The department's main objective is to cater to the financial needs of public colleges and strengthen governance and management in those institutions.

In contrast, private or autonomous colleges are operated under independent governing bodies. These colleges collect fees from students and are free to offer educational services to students. As the data was compiled from a number of cities, colleges, and situations in Punjab, I was able to reach a broader population of diverse locations and backgrounds.

In the second phase, two in-depth online interviews were performed with the SWPDs, who were selected by convenience sampling. Participant one was a female student who studied at a government college for women and encountered barriers at the PW College. The second participant was a male student who studied at an autonomous college for boys

and experienced the need for several adjustments for his disabilities at the AU College. I contacted those SWPDs through email and sent them the information sheet about the research and consent form (see Appendix D and E). After signing the consent forms, the online interviews with the participants were audio-recorded via the Zoom platform. I faced some challenges concerning connectivity with the interviewees due to frequent power breakdown in Pakistan, poor internet signals, and differences in time between Pakistan and Australia; however, these were eventually resolved.

3.3   Data Analysis Techniques

Quantitative Data Analysis

After the information collection, the analysis of the quantitative data in Phase 1 was implemented. The response rate was 80% and was considered a high-level reciprocation (Creswell & Creswell, 2017). The quantitative data were analysed using SPSS Statistics software. Through the frequency tables and percentage analysis, the demographic profile of respondents and the obstacles were also descriptively investigated. The demographic profile of respondents was interpreted by gender, college type, education level, nature of the disability, and physical disability type. The obstacles were divided into structural, attitudinal, and educational barriers and analysed into different quantitative themes (see Appendix G). In reporting the quantitative results, tables and graphs were utilised to summarise the statistical information.

Qualitative Data Analysis

In Phase 2, findings from Phase 1 were shared with the two SWPDs, and those interviews were also recorded via Zoom. Each interview was about 60 minutes in duration and was conducted in the participants' native Urdu language. After exploring the data, results were translated into English language and then transcribed. Before analysing the data, I

shared these transcriptions with the interviewees to check for accuracy and further feedback. A phenomenological approach was used to analyse the qualitative data, which is a component of the mixed-method research approach. The fundamental objective of the phenomenological approach was to develop a greater understanding of the participants' experiences through their lived or subjective experiences (Mayoh & Onwuegbuzie, 2015). Here, the lived experience is neither a property of the subject nor a function of the object but the product of a "strife" *between* subject and object, which indicates the crossroads of two opposing forces that want to take experience in two different directions (Mølbak, 2011). The first step of the phenomenological approach to data analysis was to develop some crafted stories or narratives accompanied by descriptions and interpretations (Mayoh & Onwuegbuzie, 2015). The meaning of phenomenological themes is multi-dimensional and multi-layered, not simple or one-dimensional. Phenomenological themes may be perceived as *structures of experience,* through which researchers try to uncover something "telling", something "meaningful", and something "thematic" in the various observed interpretations (Van Manen, 2016).

One crafted story of Participant 1 with its description and interpretation is included in Appendix H. From these crafted stories, I developed themes to report the findings, and include an overview of the qualitative themes in Appendix I**.** In the discussion chapter, each phase was triangulated into a third phase to increase the data reliability and validity while interpreting the results (Bowen et al., 2017). Again, the process assisted me in combining findings from the two rigorous approaches and providing a broader picture of the results than either method could do alone (Heale & Forbes, 2013).

3.4 Chapter Summary

This chapter outlined the rationale for selection of the sequential explanatory mixed-method research approach. This process included data collection methodology through the two instruments, an online survey questionnaire, and semi-structured interviews. The quantitative data analysis technique was descriptive, and the qualitative data were analysed through the phenomenological methodology. The next chapter outlines the research findings based upon the two data collection methods.

4.   Findings

4.1   Introduction

In chapter three, I identified that I employed an explanatory mixed-method approach, in which both quantitative and qualitative data were collected and analysed. I opted for the sequential descriptive mixed-method approach, which was systematic and planned (Creswell & Creswell, 2017). In the first phase of this study, data was collected from SWPDs to understand general obstacles related to inclusive education (IE). These quantitative data were helpful to understand general trends and patterns in the population (Bowen et al., 2017). In the second phase of this study, interviews were conducted with representatives of selected SWPDs to understand the broad context of the study. In this chapter, I present the interpretations of the survey and the results of the interviews.

4.2   Phase 1 (Survey)

There are two parts to the survey questionnaire. Part A includes a demographic profile, and in Part B, questions about obstacles faced by the student with disabilities at the college level were covered. These obstacles are divided into structural, attitudinal, and educational barriers.

4.3   Part A: Demographic Profile of Respondents

A flyer distributed a 5-point Likert scale survey questionnaire ranging from "strongly disagree" to "strongly agree" via selected DPO's and online forums of persons with disabilities. The estimated sample size was 70-100. The number of respondents consisted of 80 undergraduate SWPDs who were current or former students in public, private, or autonomous colleges in various cities of Punjab, providing a high response of 80%. Missing

47

data was also additionally considered. I will mention that aspect in more detail in each specific category as it arises. From 80 undergraduate SWPDs, 77 responded to the demographic profile. For three types of obstacles, 76 participants responded to the structural impediments, 73 responded to the attitudinal barriers, and 65 responded to the educational blocks. Those identifying as male or female SWPDs were virtually equal as 49.4% (n=38) were male and 50.6% (n=39) were female.

College Type

The majority of respondent SWPDs 68.83% (n=53) studied in public colleges, while 31.17% (n=24) SWPDs studied in private/autonomous colleges. In public colleges, the proportion of male SWPDs (35.5%) was 2.3% higher as compared to female SWPDs (33.3%), while in private/autonomous colleges the proportion of male SWPDs (14.5%) was 2.2% lower as compared to proportion of female SWPDs (16.7%) (see Figure 1).
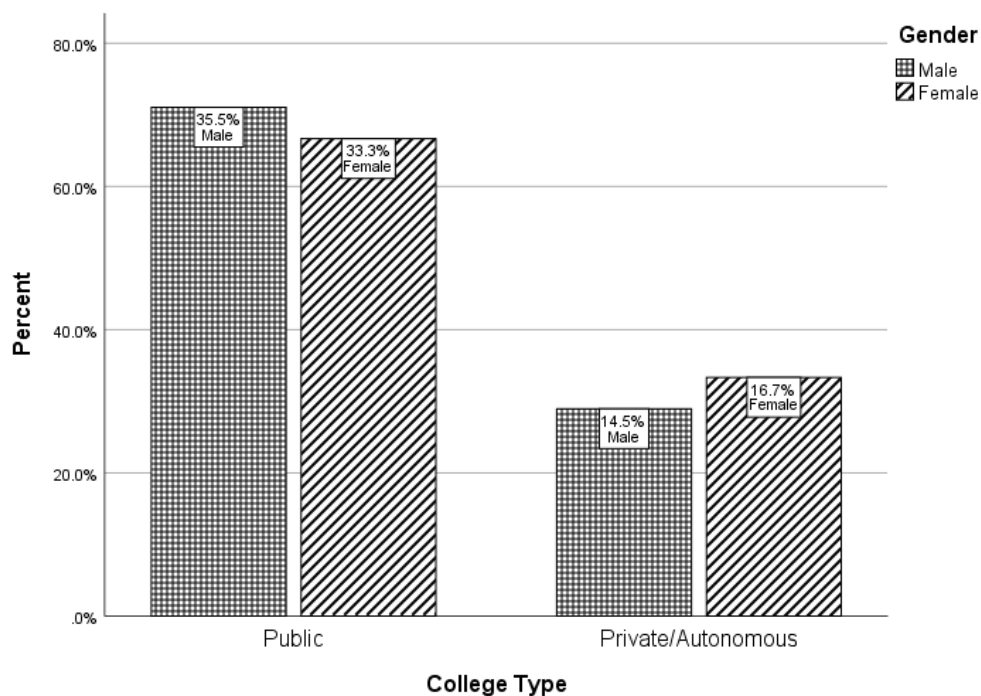
Figure 1: College Type by Gender

Education Level

A high percentage of SWPDs (59.7%) had studied at the Graduation level as compared to Masters (24.7%) level. Only 15.6% of SWPDs had studied at the Intermediate level. At the Graduation level, the proportion of male SWPDs (63.2%) was higher than female SWPDs (56.4%). In contrast, at the Masters level, the ratio of male SWPDs (21.1%) was lower than female SWPDs (28.2%). However, at the Intermediate level, the ratio of male SWPDs (15.8%) was approximately equal to female SWPDs (15.4%) (see Figure 2).
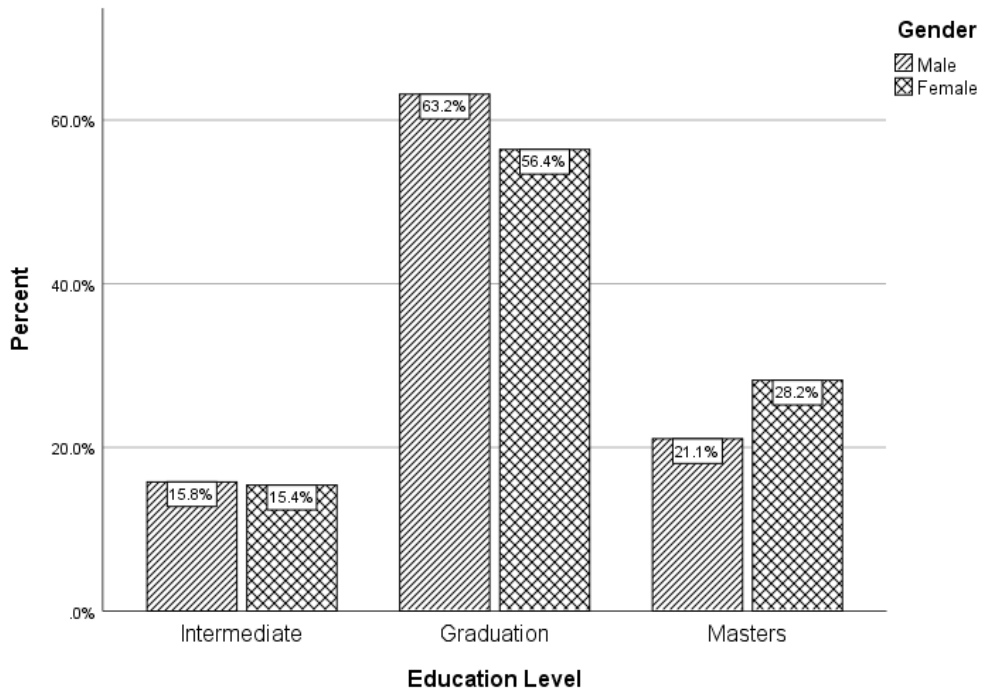
Figure 2: Education Level by Gender

Nature of Disability

Moderate disability was very common 44.2% (n=34) among SWPDs. Severe disability was evident also, with a proportion of 39% (n=30) among SWPDs. Only 16.9% (n=13) of SWPDs observed had mild disabilities. With moderate disability, 50.0% SWPDs received Intermediate level education, while 45.7% SWPDs were Graduated. With severe disability, 25.0% SWPDs received Intermediate level education, while 43.5% were Graduated. In both moderate and severe, 36.8% SWPDs received Masters level education (see Figure 3). Therefore, with moderate and severe disabilities, SWPDs are more persuaded to receive a higher level of education.
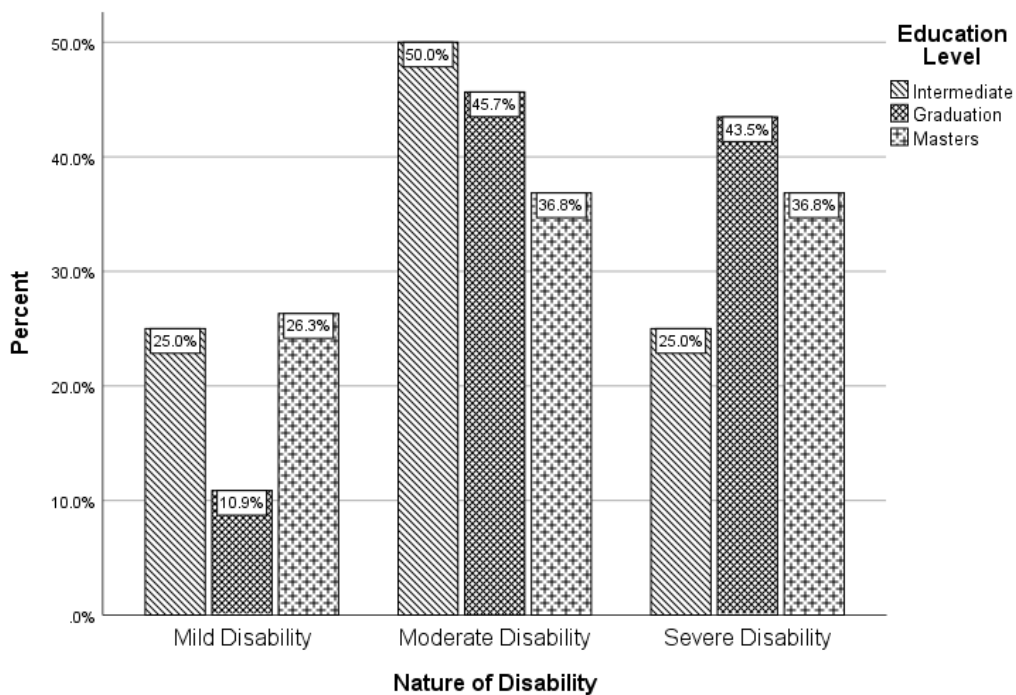
Figure 3: Participants' Nature of Disability by Education Level

Physical Disability Type

In physical disability type, the highest proportion of disability type was polio 41.6% (n=32), while the smallest proportion of disability type was spina bifida 3.9% (n=3). The other ratios of disability type were muscular dystrophy 26.0% (n=20) and spinal cord injury 16.9% (n=13). With polio disability, 50.0% SWPDs studied at Graduation level and 36.8% SWPDs studied at Masters level. With spina bifida disability type, only 4.3% SWPDs studied at Graduation level and 8.3% SWPDs studied at Intermediate level (see Figure 4). Therefore, physical disability type can also affect SWPDs motivation to receive higher education level.
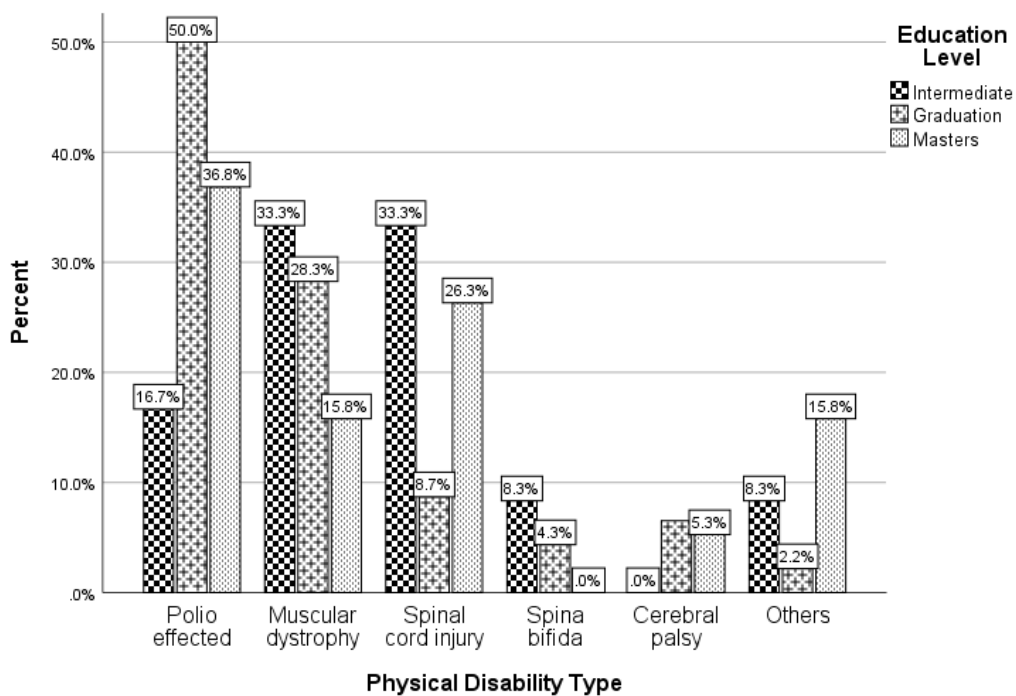
Figure 4: Physical Disability Type by Education Level

4.4 Part B: Obstacles faced by Student with Physical Disabilities at College Level

In part B of the survey questionnaire, 40 questions were asked about the structural, attitudinal, and educational obstacles that have been faced by SWDs at the college level.

Structural Obstacles

Concerning structural obstacles, there were 12 items (see Table 1). The total sample size was 80. However, for structural obstacles, valid cases were 95% (n=76) and missing data was 5% (n=4). Overall, the significant structural obstacle for SWPDs was disabled unfriendly infrastructure as there was an absence of ramps and lifts for independent movement in the colleges. Evenly, they faced hurdles with accessing basic services in the colleges. Classrooms were narrow and so congested that most students could not easily move in the classrooms and could not find appropriate seats. Furthermore, the nonavailability of accessible toilets and signboards or directions to navigate the campus were also a big challenge. Travelling from home to the college and then back home was another big concern for them as college buses and public transport were inaccessible.

Table 1: Frequency Percentages of Structural Obstacle Items

Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total
Infrastructure is disabled friendly.	31.6%	32.9%	7.9%	21.1%	6.6%	100%
Ramps for the disabled to move independently.	31.6%	26.3%	11.8%	19.7%	10.5%	100%
Lift for a disabled to go up levels.	50.0%	18.4%	7.9%	18.4%	5.3%	100%
Appropriate signboards and directions make it comfortable for SWDs to navigate the campus.	31.6%	34.2%	9.2%	21.1%	3.9%	100%
SWDs are facing hurdles to access essential services (canteen, playground).	15.8%	11.8%	14.5%	28.9%	28.9%	100%
The College library is accessible for SWDs.	23.7%	28.9%	10.5%	30.3%	6.6%	100%
Accessible toilets in the college for SWDs.	42.1%	28.9%	14.5%	7.9%	6.6%	100%
Doorways of classrooms are widened and have easy wheelchair access.	11.8%	21.8%	14.5%	40.8%	11.8%	100%
SWPDs can easily move in classrooms.	10.5%	34.2%	22.4%	25.0%	7.9%	100%
SWDs have appropriate seating in classrooms.	18.4%	39.5%	9.2%	25.0%	7.9%	100%
Travelling from home to college is a big concern for SWDs.	15.8%	6.6%	9.2%	30.3%	38.2%	100%
College bus is accessible for SWPDs.	48.7%	28.9%	6.6%	11.8%	3.9%	100%

College Premises

According to Table 1, 64.5% of SWPDs strongly disagreed or disagreed that they had disabled-friendly college infrastructure. In contrast, only 27.7% SWPDs either agreed or strongly agreed that college infrastructure was disabled-friendly. In addition, 68.4% SWPDs either strongly disagreed or disagreed that there was a lift for them to go up levels in the college. In contrast, only 23.7% SWPDs strongly agreed or agreed that their college had a lift to go up levels. In addition, 65.8% of SWPDs either strongly disagreed or disagreed that there were appropriate signboards and directions for them to navigate the campus. In contrast, 25% SWPDs agreed that they found appropriate signboards and directions which made it comfortable for them to navigate the campus.

According to Figure 5, 67.3% of SWPDs from public Colleges and 58.3% of SWPDs from private/autonomous colleges either strongly disagreed or disagreed that their college infrastructure is disabled friendly. In contrast, only 28.8% of SWPDs from public colleges and 25.0% of SWPDs from private/autonomous colleges either strongly agreed or agreed that their college infrastructure is disabled friendly. Therefore, premises in public colleges were not disabled friendly as compared to private/autonomous colleges.
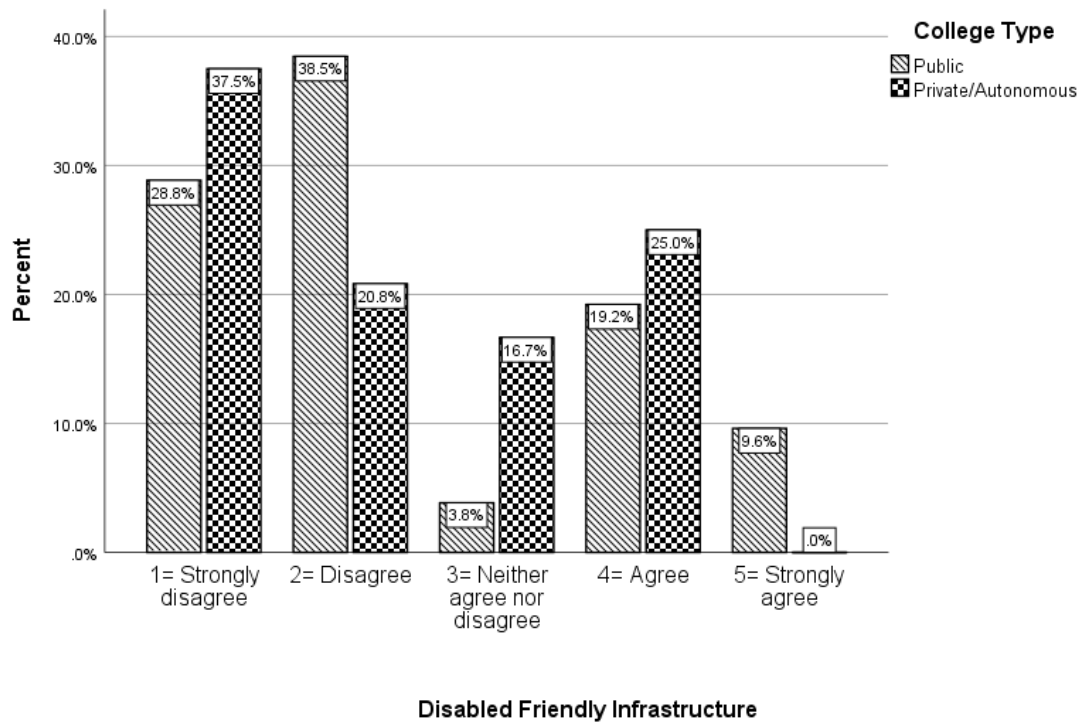
Figure 5: Structural Obstacle - Disabled Friendly Infrastructure by College Type

Access to Basic Amenities

Concerning access, 57.8% of SWPDs either strongly agreed or agreed that they were facing hurdles to access essential services, such as canteen and playground in the college. Only 27.6% SWPDs either strongly disagreed or disagreed that they were facing hurdles to access essential services, such as canteen and playground in the College. In addition, 52.6% of SWPDs either strongly disagreed or disagreed that the college library was accessible for them, while 36.9 % SWPDs either strongly agreed or agreed that the college library was accessible. While, 71% of SWPDs either strongly disagreed or disagreed that there was an accessible toilet in their college, only 14.5% of SWPDs either strongly agreed or agreed that there was an accessible toilet for them in the college. According to Figure 6, the availability of accessible toilets was a big concern for SWPDs in public or autonomous/private colleges, as evidenced by 77.1% of SWPDs from public colleges and 77% of SWPDs from independent/private colleges either strongly disagreed or disagreed with the availability of

accessible toilets. In contrast, only 15.4% of SWPDs from public colleges and 12.5% of SWPDs from autonomous/private colleges either strongly agreed or agreed for availability of accessible toilet in their respective institutions.
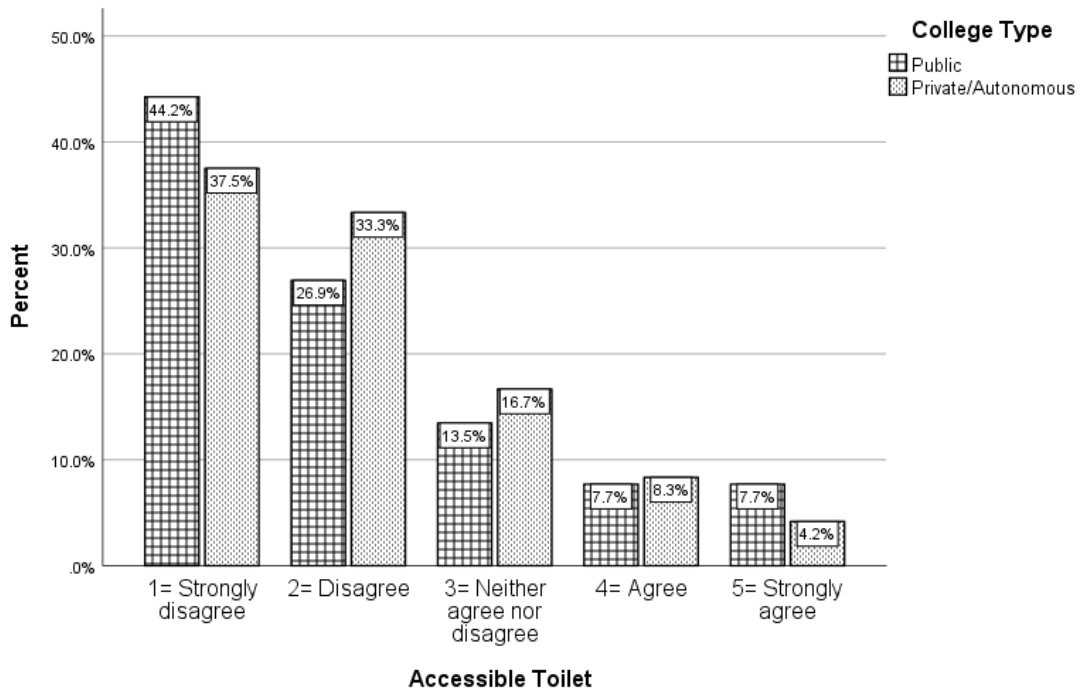
Figure 6: Availability of Accessible Toilet by College Type

Classrooms Accessibility

Concerning classrooms, 52.6% SWPDs either strongly agreed or agreed that the doorways of classrooms were widened and had easy wheelchair access. In contrast, 27.6% SWPDs either strongly disagreed or disagreed that the doorways of classrooms were widened and had easy wheelchair access. In addition, 44.7% of SWPDs either strongly disagreed or disagreed that they could efficiently move in the classrooms, while 32.9% SWPDs either strongly agreed or agreed that they could easily move in the classrooms. Moreover, 57.9% of SWPDs strongly disagreed or disagreed there was appropriate seating in classrooms, whereas 32.9% SWPDs either strongly agreed or agreed that they had appropriate seating in classrooms (see Figure 7).
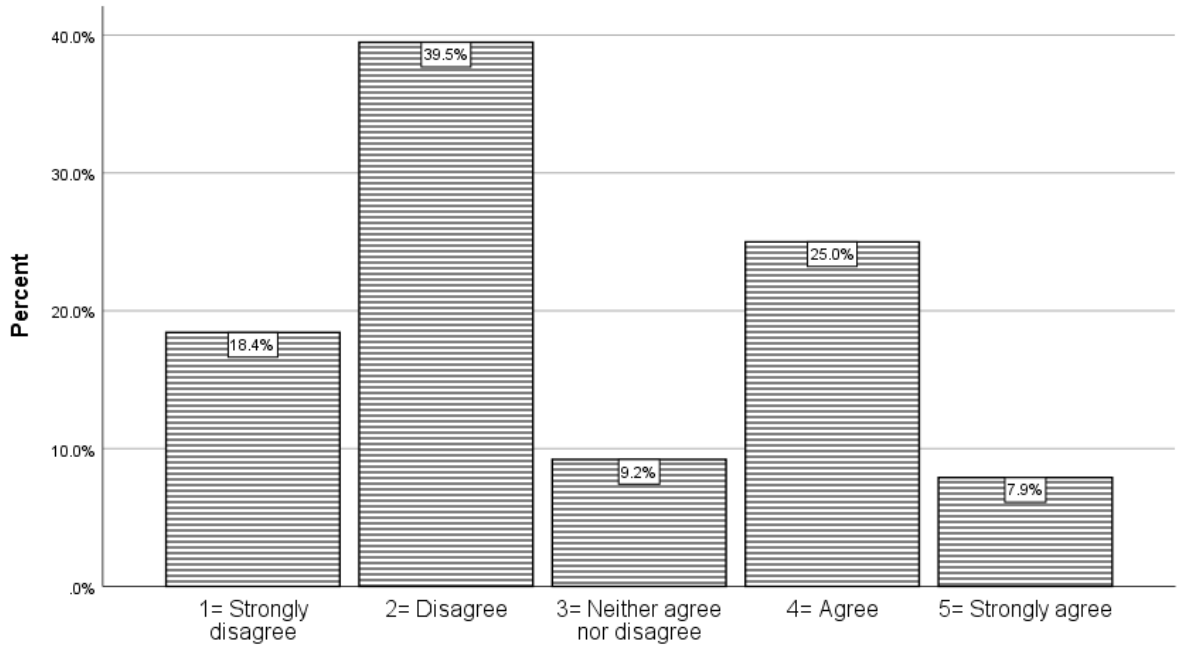
Figure 7: Structural Obstacle - SWDs have Appropriate Seating in Classrooms

Transport Accessibility

Regarding transport, 68.5% of SWPDs either strongly agreed or agreed that travelling to a college was a big concern for them. Only 22.4% of SWPDs strongly disagreed or disagreed that travelling to a college was a big concern. Consequently, 77.6% of SWPDs either strongly disagreed or disagreed that the college bus was accessible for them, and only 15.7% of SWPDs either strongly agreed or agreed that the college bus was accessible. Figure 8 illustrates that SWPDs from both colleges, either public or private/autonomous, faced significant hurdles due to the non-availability of an accessible bus. Then, 75% of SWPDs of public colleges and 83.3% of SWPDs of private/autonomous strongly disagreed or disagreed that a college bus was accessible for them and only 19.2% of SWPDs from public colleges and 8.4% of SWPDs from private/autonomous colleges either strongly agreed or agreed that college bus was accessible for them.
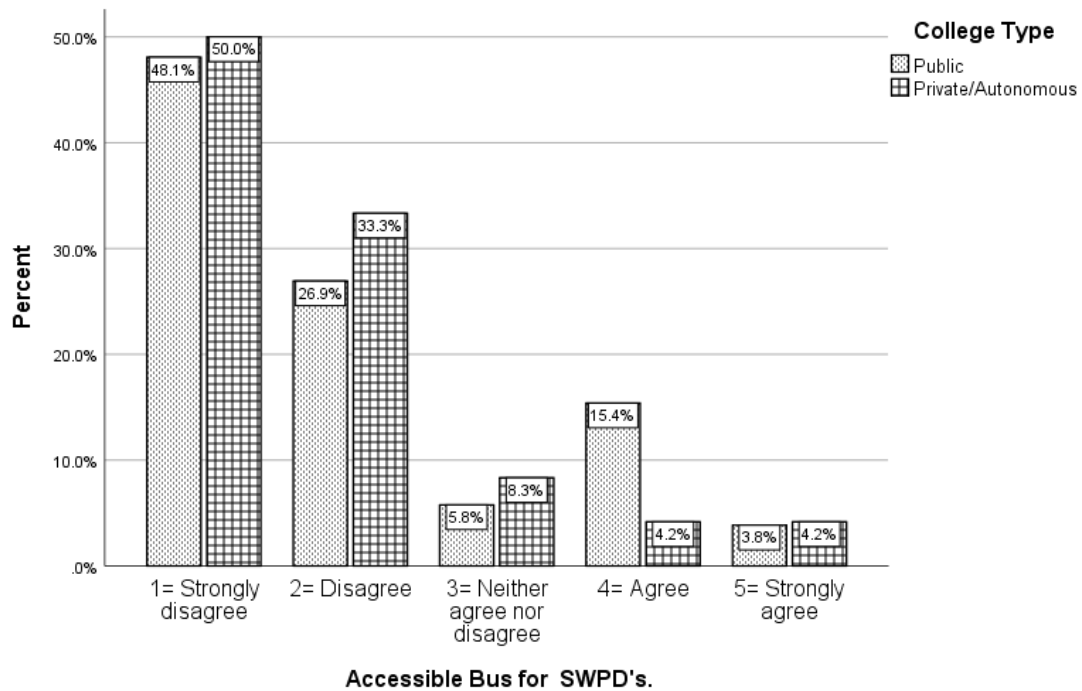
Figure 8: Structural Obstacle - Accessible Bus for SWPDs by College Type

Attitudinal Obstacles

Concerning attitudinal obstacles, there were 11 items (see Table 2). For attitudinal barriers, 73 participants responded, so valid cases were 92% (n=73), and missing data was 8.8% (n=7). In general, the most significant attitudinal obstacle was the lack of understanding of the college administration and teachers about the special needs of SWPDs. Consequently, they faced discrimination in the learning process and felt inferiority complex and social isolated in a mainstream college. However, SWPDs mainly disagreed with the suggestion that they faced bullying, violence, and abuse from their teachers or classmates or that their school colleagues had discriminatory attitudes. Overall, it was found that SWPDs met positive attitudes from their teachers and classmates in mainstream colleges.

Table 2: Frequency Percentages of Attitudinal Obstacle Items

Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total %
College administration understands the special needs of SWDs.	19.2%	26.0%	21.9%	27.4%	5.5%	100%
As a SWD, you feel inferiority complex in a mainstream college.	13.7%	20.5%	13.7%	45.2%	6.8%	100%
SWDs feel social isolation in a mainstream college.	5.5%	21.9%	11.0%	46.6%	15.1%	100%
Mainstream college suits best to a SWD than a special college.	12.3%	16.4%	23.3%	32.9%	15.1%	100%
Teachers provide exceptional support to SWDs in classrooms.	9.6%	24.7%	28.8%	31.5%	5.5%	100%
Teachers have the same expectations from SWDs as they have from other students.	5.5%	9.6%	20.5%	46.6%	17.8%	100%
Teachers include SWDs in all activities of classwork.	12.3%	19.2%	16.4%	38.4%	13.7%	100%
SWDs face discrimination in the learning process.	11.0%	26.0%	19.2%	31.5%	12.3%	100%
SWDs face bullying, violence, and abuse from teachers.	27.4%	37.0%	20.5%	12.3%	2.7%	100%
Classmates have discriminatory attitudes with SWDs.	19.2%	24.7%	26.0%	23.3%	6.8%	100%
SWDs face bullying, violence, and abuse from their classmates.	20.5%	28.8%	26.0%	20.5%	4.1%	100%

Administration's Perceptions of Disability

According to Table 2, 45.2% of SWPDs strongly disagreed or disagreed, yet 32.9% SWPDs strongly agreed or agreed that the college administration understood their particular needs. By college type, 44.9% of SWPDs in public colleges and 45.8% of SWPDs in private/autonomous colleges strongly disagreed or disagreed with the administration understanding about their particular needs. In contrast, 34.7.9% of SWPDs in public colleges and 45.8% of SWPDs in private/autonomous colleges strongly agreed or agreed with administration understanding about their particular needs (see Figure 9).

In addition, 34.2% of SWPDs strongly disagreed or disagreed they felt inferiority complex; however, 52% SWPDs strongly agreed or agreed that they felt inferiority complex in a mainstream college. Moreover, 27.4% of SWPDs strongly disagreed or disagreed they felt social isolation, although 61.7% SWPDs strongly agreed or agreed that they felt social isolation in a mainstream college. Finally, 28.7% of SWPDs strongly disagreed or disagreed that a mainstream college was suited best to a SWD, while 48% SWPDs strongly agreed or agreed that a mainstream college was suited best to a SWD compared to a particular college.
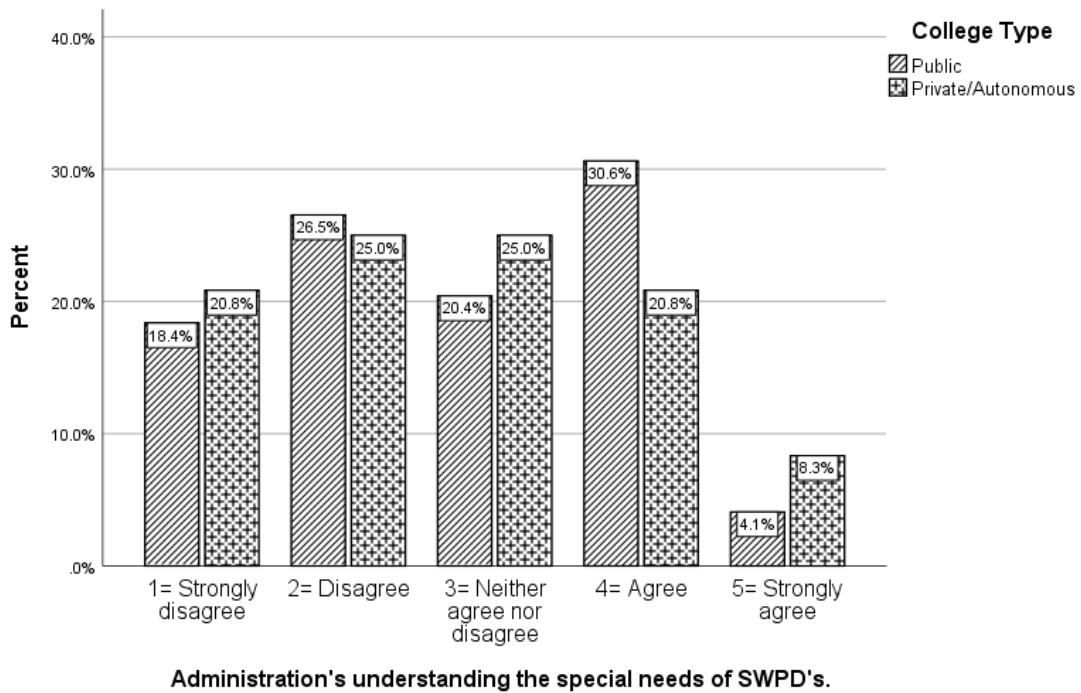
Figure 9: Administration's Understanding the Special Needs by College Type

Attitudes of Teachers and Peers

Concerning attitudes of teachers and peers, 34.3% of SWPDs strongly disagreed or disagreed, whereas 37% of SWPDs strongly agreed or agreed that their teachers provided exceptional support in classrooms. Only 15.1% SWPDs strongly disagreed or disagreed, while 64.4% SWPDs strongly agreed or agreed that teachers had the exact expectations from them as they had from other students. Additionally, 31.5% SWPDs strongly disagreed or disagreed, yet 52.1% SWPDs strongly agreed or agreed that teachers included them in all classwork activities (see Figure 10). Concerning discrimination, 37.0% of SWPDs strongly disagreed or disagreed, whereas 43.8% SWPDs strongly agreed or agreed that they faced discrimination in the learning process. Likewise, 64.4% or a majority of SWPDs strongly disagreed or disagreed that they faced bullying, violence, and abuse; however, 15% SWPDs strongly agreed or agreed that they faced bullying, violence, and abuse from their teachers.
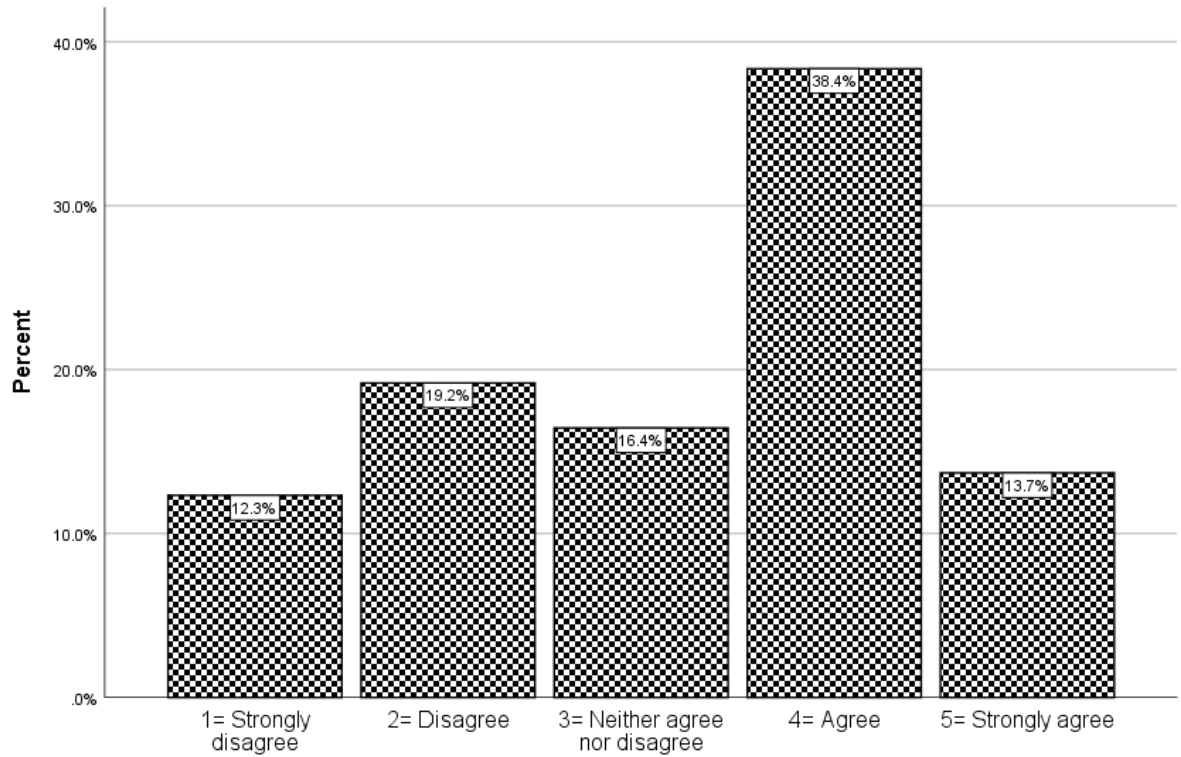
Figure 10: Attitudinal Obstacle - Teachers Include SWDs in all Activities

of Classwork

Concerning discrimination, 43.9% of SWPDs strongly disagreed or disagreed, although 30.1% SWPDs strongly agreed or agreed that their classmates had discriminatory attitudes toward them. Similarly, 49.3% of SWPDs strongly disagreed or disagreed; however, 24.6% SWPDs strongly agreed or agreed that they faced bullying, violence, and abuse from their classmates (see Figure 11).
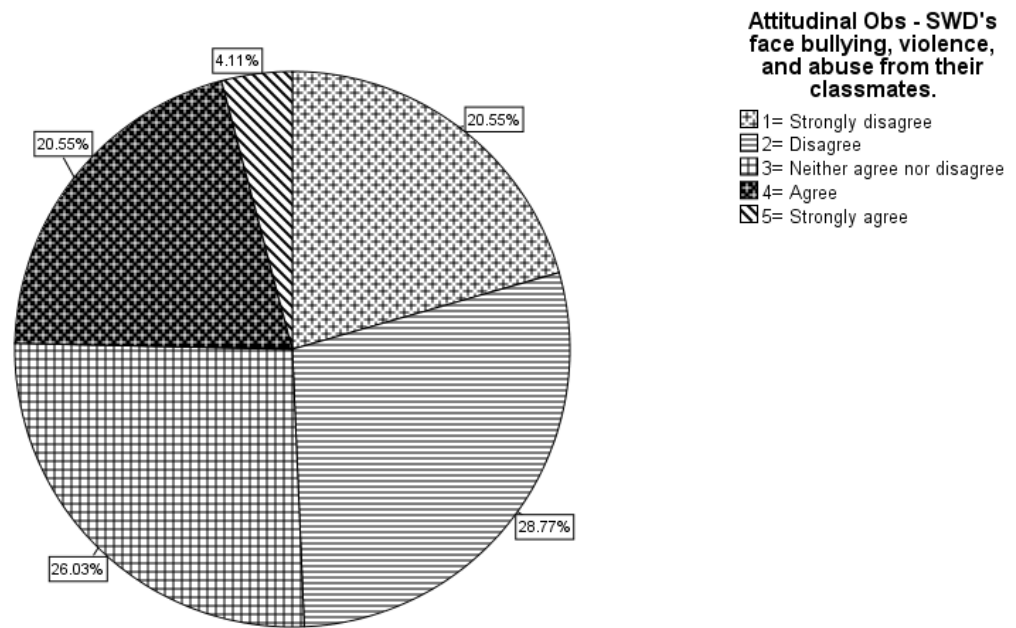
Figure 11: Attitudinal Obstacle - Facing Bullying From Their Classmates

Educational Obstacles

Regarding educational obstacles, there were 17 items (see Table 3). However, for academic obstacles, valid cases responded 81.3% (n=65), and missing data totalled 18.7% (n=15). According to Dong and Peng (2013), missing data of 15% to 20% is common in educational and psychological studies. There is no need to apply any method to deal with the missing data. Overall, most SWPDs gained admission to the college on the special seat, and the college also provided a fee concession at the time of admission. The most significant educational obstacles were that teachers did not have appropriate lesson plans, or the college curriculum was not accommodating to the needs of SWDs. Primarily this was because the teacher had no awareness or skills to implement the requirements needed or knowledge of how to engage SWDs with open communication. In classrooms, SWPDs faced difficulties in note-taking participation in class discussions and were given less of a preference to

participate in extra-curricular activities. Provision of the writer assistant was a significant challenge for SWPDs in internal exams and in external exams. Furthermore, inaccessibility of the college examination centre and board or university examination centres was found to be a critical obstacle for SWPDs.

Table 3: Frequency Percentages of Educational Obstacles

Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total %
College offers a special quota or special seat at the time of admission for a SWD.	10.8%	21.5%	7.7%	35.4%	24.6%	100%
The college provides fee concessions to SWDs.	9.2%	33.8%	4.6%	27.7%	24.6%	100%
College provides special scholarships to SWDs.	20.0%	33.8%	6.2%	21.5%	18.5%	100%
The curriculum of the College is modified to the needs of SWDs.	26.2%	38.5%	4.6%	23.1%	7.7%	100%
SWD's are provided with assistive devices from the education department or the college, which help them in mobility or learning.	41.5%	26.2%	12.3%	7.7%	12.3%	100%
Teachers plan their lessons according to the special needs of SWDs.	29.2%	44.6%	6.2%	13.8%	6.2%	100%
Teachers have the skills to understand the basic requirements of SWDs.	20.0%	40.0%	15.4%	13.8%	10.8%	100%
Teachers are familiar with different ways of communication with SWDs.	24.6%	35.4%	16.9%	16.9%	6.2%	100%
SWDs face difficulties in note-taking during the lecture.	1.5%	13.8%	9.2%	46.2%	29.2%	100%
SWDs face difficulties participating in class discussions.	12.3%	18.5%	20.0%	32.3%	16.9%	100%
SWDs are given preferences to participate in extra-curricular activities.	16.9%	32.3%	23.1%	13.8%	13.8%	100%
College administration provides writers to SWDs during internal or College exams.	24.6%	27.7%	7.7%	27.7%	12.3%	100%
College administration assists in arranging writers	19.7%	29.5%	14.8%	24.6%	11.5%	100%

for SWDs during board or university exams.					
Extra time is granted to SWDs during college or internal exams.	29.2%	27.7%	12.3%	16.9%	13.8%	100%
Extra time is granted to SWDs during board or university exams.	27.9%	19.7%	18.0%	19.7%	14.8%	100%
The college examination centre is accessible for SWDs.	35.4%	18.5%	16.9%	20.0%	9.2%	100%
Board or University examination centres are accessible for SWD's.	45.9%	16.4%	13.1%	13.1%	11.5%	100%

College Policy for SWPDs

According to Table 3, 32.3% of SWPDs strongly disagreed or disagreed and 60% SWPDs strongly agreed or agreed that the college where they studied offered special quota or a special seat to them at the time of admission. Additionally, 43% of SWPDs strongly disagreed or disagreed but 52.3% SWPDs strongly agreed or agreed that the college provided fee concession to them. Moreover, 53.8% of SWPDs strongly disagreed or disagreed but 40% SWPDs strongly agreed or agreed that the college provided special scholarships for them (see Figure 11). Furthermore, 64.7% of SWPDs strongly disagreed or disagreed, however 30.8% SWPDs strongly agreed or agreed that the curriculum of the college was modified according to the needs of students with disabilities. Finally, 67.7% of SWPDs strongly disagreed or disagreed, but 20% SWPDs strongly agreed or agreed that they were provided any assistive devices from the education department or the college which helped them in mobility or learning.
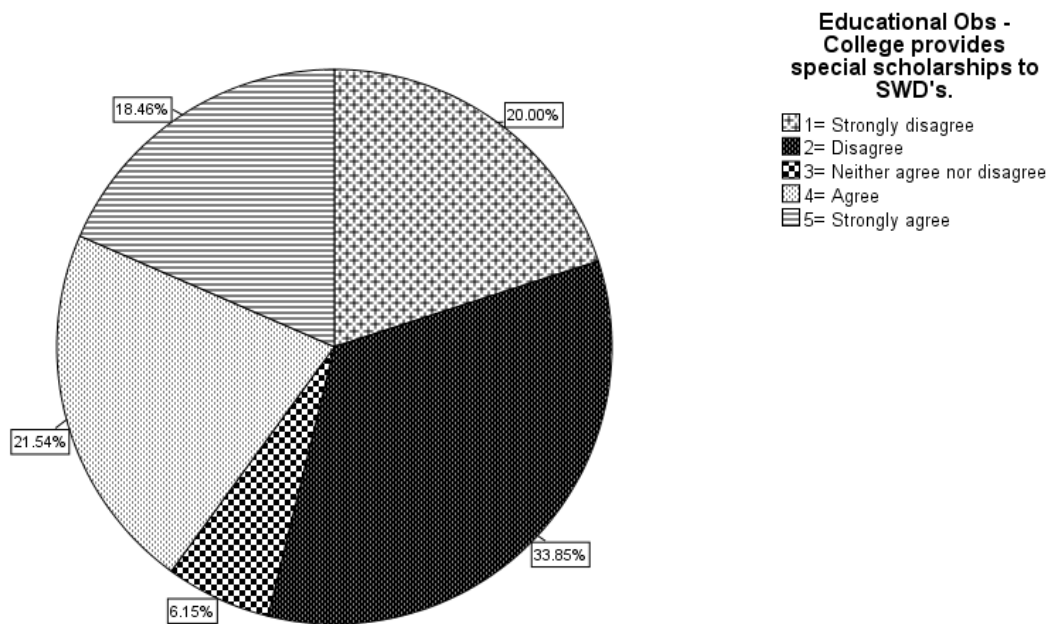
Figure 12: Educational Obstacle - Provision of Special Scholarship

Access to Classroom Activities

Concerning classroom activities, 73.8% of SWPDs strongly disagreed or disagreed, yet 20% SWPDs strongly agreed or agreed that teachers planned their lessons according to their particular needs. Additionally, 60.0% of SWPDs strongly disagreed or disagreed, while only 24.6% SWPDs strongly agreed or agreed that teachers had some skills to understand the basic requirements of SWDs. Finally, 60% of SWPDs strongly disagreed or disagreed, although 23.1% SWPDs strongly agreed or agreed that teachers were familiar with different ways of communication with students with disabilities (see Figure 12).
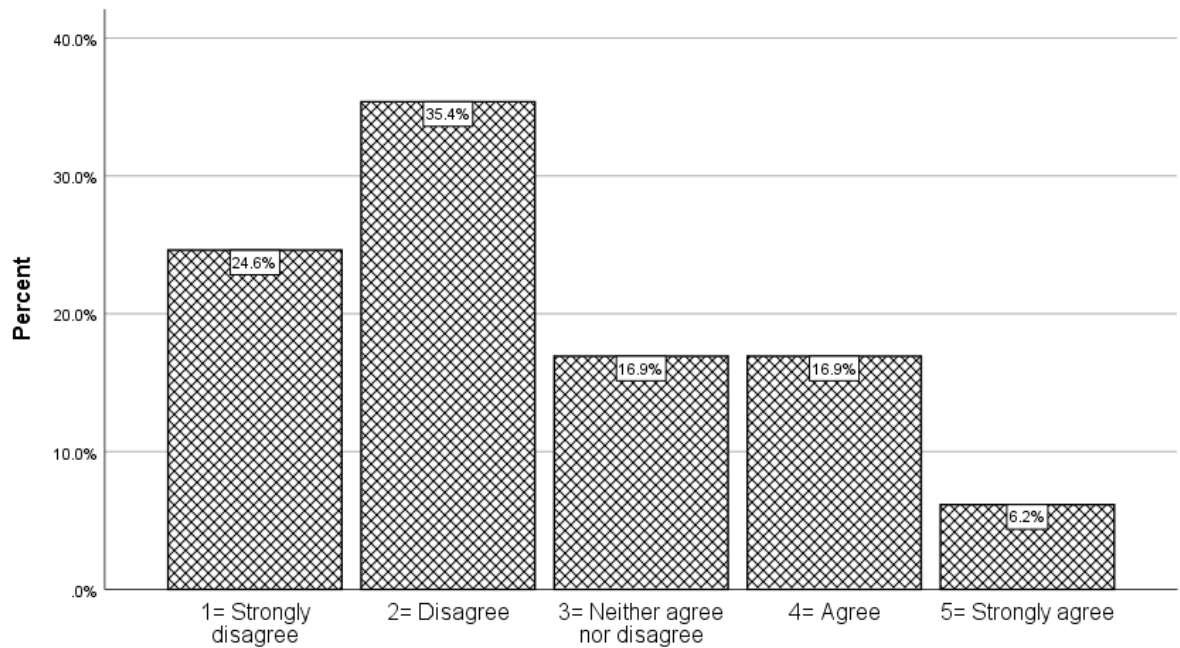
Figure 13: Educational Obstacle - Teachers Familiarisation

with Different Ways of Communication to SWDs

Only 15.3% of SWPDs strongly disagreed or disagreed, while 75.4% SWPDs strongly agreed or agreed that they faced difficulties in note-taking during the lecture. In addition, 30.8% of SWPDs strongly disagreed or disagreed, yet 49.2% SWPDs strongly agreed or agreed that they faced difficulties participating in class discussions. Whereas 49.2% SWPDs strongly disagreed or disagreed, only 27.6% SWPDs strongly agreed or agreed that they were given preferences to participate in extra-curricular activities (see Figure 13).
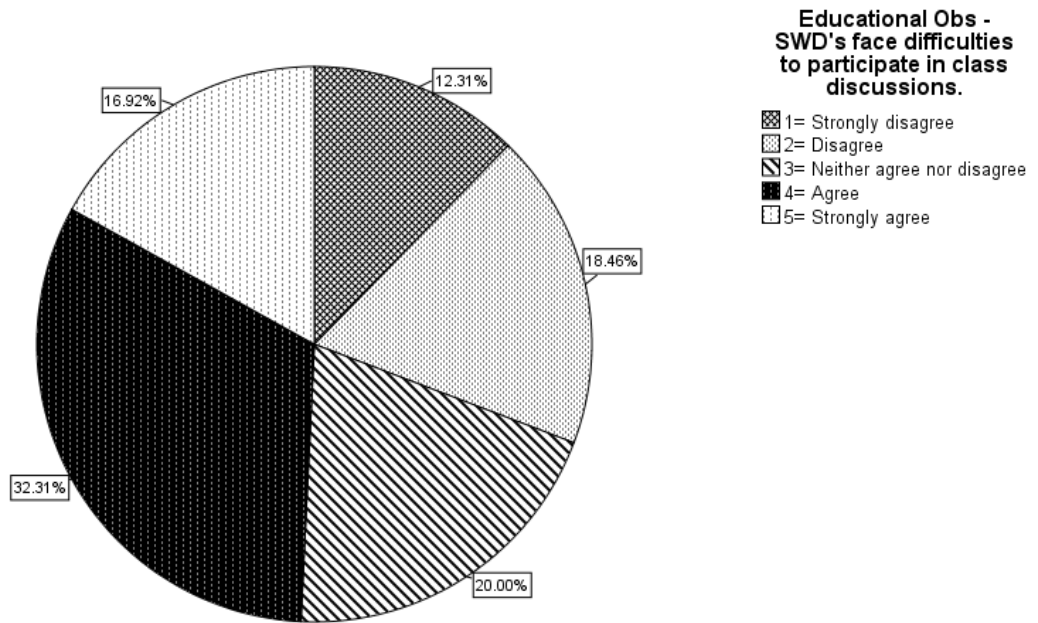
Figure 14: Educational Obstacle - SWDs are Given Preferences to Participate

in Extra-Curricular Activities

Access to Examination

Concerning college examinations, 52.3% of SWPDs strongly disagreed or disagreed, while 40% SWPDs strongly agreed or agreed that college administration provided writers for them during internal college exams. In addition, 49.2% of SWPDs strongly disagreed or disagreed, although 36.1% SWPDs strongly agreed or agreed that college administration assisted them to arrange writers during board or university exams. Whereas 56.9% of SWPDs strongly disagreed or disagreed, only 30.7% SWPDs strongly agreed or agreed that time extensions were offered to them during the college or internal exams. Additionally, 47.6% SWPDs strongly disagreed or disagreed, but 34.5% SWPDs strongly agreed or agreed that time extensions were offered to them during board or university exams (see Figure 14).
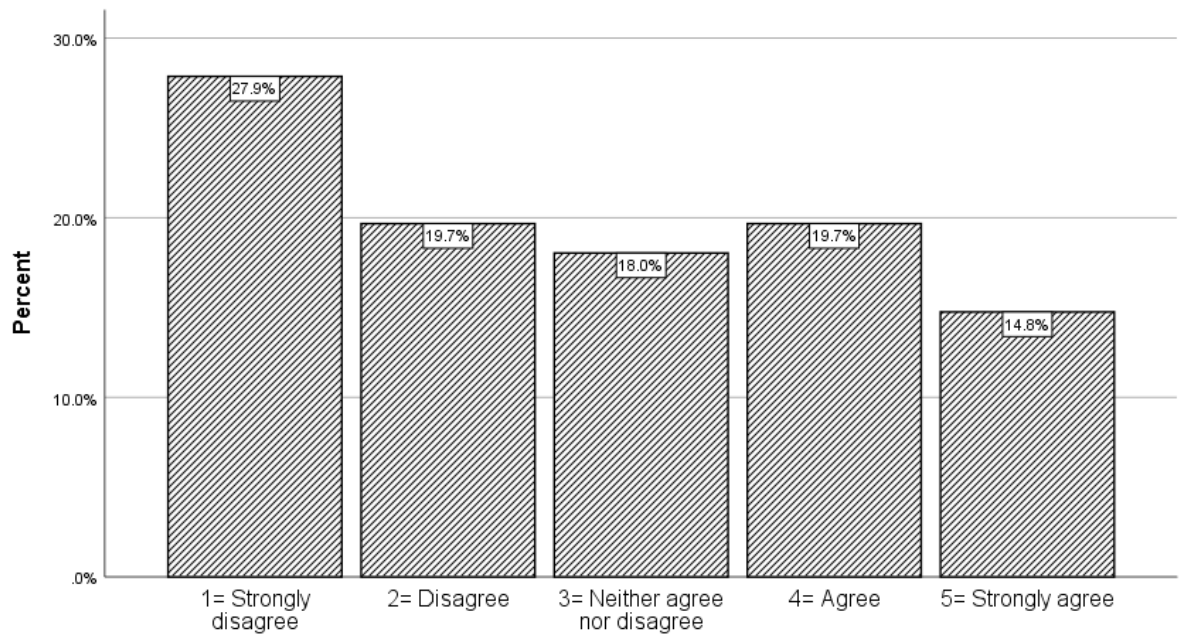
Figure 15: Educational Obstacle - Extra Time is Granted to SWDs

During Board or University Exams

Whereas 53.9% of SWPDs strongly disagreed or disagreed, only 29.2% SWPDs strongly agreed or agreed that the college examination centre was accessible for them. Finally, a majority of 62.3% of SWPDs strongly disagreed or disagreed, while 24.6 % SWPDs strongly agreed or agreed that the board or university examination centres were accessible for students with disabilities.

4.5 Reliability of measurement

Table 4 represents the estimated values of Cronbach's alpha to examine the reliability and internal consistency of the items. The Cronbach's high coefficient of a construct implies that the scale has higher internal consistency (Cresswell, 2015). For the present sample, the values of Cronbach's alpha for each multi-item construct possesses reliability: structural

obstacles (alpha=0.8), attitudinal obstacles (alpha=0.6), and educational obstacles (alpha=0.9).

Table 4: Reliability of Measurement

Constructs	Valid N	Number of items	Cronbach's alpha
Structural Obstacles	76	12	0.8
Attitudinal Obstacles	73	11	0.6
Educational Obstacles	61	17	0.9

4.6   Phase 2 (Semi-Structured Interviews)

For the second phase of this study, interviews were conducted with two students with physical disabilities. One female was chosen who had experienced difficulties at a government college for women and a male who experienced several accommodations for his disabilities at an autonomous college for boys. Results from Phase 1 were shared with the participants of the interviews beforehand. To ensure confidentiality and anonymity of the research participants, for this study, I used pseudonyms to refer to the study participants as P1 and P2 and the college name where they studied as the PW College (for P1) and the AU College (for P2). After the survey analysis, the semi-structured interview questions were reconsidered to assist more focus on the survey responses. The interviews were reviewed after the survey analysis, so the Phase 1 analysis informed it.

Demographic Information of the Participants

The first participant (P1) is a female student with muscular dystrophy disability, and she uses a wheelchair to move around. She studied in a public college (the PW College). The PW College works under the surveillance of the Government Higher Education Department

(HED). Due to a hierarchical and centralised system, the principal of the PW College has limited autonomy to take some independent decisions. The primary duty of the principal is in regard to compliance with the rules and regulations directed by the HED.

The second participant (P2) is a male student. His disability was contributed to by polio, which affected his legs and right arm and restricted him to electronic wheelchair access only. He studied in an autonomous college (AU College). The AU College was awarded autonomy in administrative and financial affairs and elevated to a university. The AU College works under an independent governing body. After establishing a Centre for Special Students (CSS), the AU College is following inclusive educational practices in many aspects. Both participants belonged to a middle-income group, and their families acknowledged education as their fundamental right.

Emergence of Themes

After the analysis of the interview data, six major and two minor themes emerged:

1. Participants' experiences about accessibility - P1 and P2 share the infrastructure of the colleges and difficulties of conveyance to access the colleges.

2. A decreased awareness of SWPDs needs - the real needs of P1 and P2 become overlooked due to a lack of understanding about disability issues in society.

3. Resilience facing different attitudes - reflects determination and willpower of P1 and P2 while facing unfriendly or unhelpful behaviours.

4. Support mechanisms for SWDs - the role of Centre for Special Students (CSS) in P2 College to begin inclusive practices in many aspects.

5. Hindrances encountered when sitting public exams - obstacles faced by P1 and P2 due to absence of an inclusive college examination system concerning the examination centre, including the provision of a scribe and extra time.

6. Family support structure - P1's parents and P2's brother were the primary supporters for their education and socialisation.

Experiences of Participants about accessibility

Access within College Premises

The PW College infrastructure was not disabled-friendly for SWPDs. The central area within the PW college was limited for P1 as there were no ramps, elevators, or accessible toilets.

P1 found one block in the main building accessible for her wheelchair in the PW College. However, she encountered barriers to access upstairs classes. As P1 commented:

When I was admitted to the College, I wanted to study a Fine Arts subject. I was informed that the Fine Arts Department was located upstairs with only stairs as access, which I could not use.

There was no elevator to go upstairs. Furthermore, P1 had no access to the college canteen and the college library, as P1 indicated:

My friends always brought some snacks and drinks for me because there were stairs.

P1 had no access to bathroom facilities in the PW College. The college bathroom for students was inaccessible, and therefore her human needs were overlooked. She commented during the interview that:

In the bathroom, an "Indian toilet seat" was fitted, and I found it restrictive for sitting. Once during college time, I experienced some difficulty and needed access to the bathroom facilities. I asked the senior staff if I could use the staffroom toilet as there

was a high toilet seat fixed in place. The head of the staffroom allowed me to use the staffroom bathroom. But the toilet door was narrow, and due to limited size, my wheelchair was restricted.

In the AU College, the newly built buildings, including two accessible bathrooms, were accessible for P2. However, a personal assistant was required for him to access the bathroom. In responding to the question of access within the AU College, P2 stated:

In the new buildings, there are ramps and elevator(s) which help me to move around independently there. In the main building, which is older, I have only access at ground floor level. The elevator(s) could not be fixed in the older building because the modifications may damage the building's ancient and historical background.

Therefore, P2 had restrictions within the main library, the examination hall, the bookshop, and the computer lab in the main or older historical building. In responding to the question of the availability of an accessible bathroom in the AU College, P2 stated:

I found two accessible bathrooms for SWDs in the college. But severe disabled like me need a personal assistant going to the bathroom. To fulfil my biological needs, then I must request with my friend or class fellow to assist me in the bathroom.

Accessibility in Transportation

As wheelchair users, P1 and P2 had limited modes of transport to approach their college. The college bus was inaccessible for both students. P1's father decided to hire a private van. Even though it was much more expensive, it provided his daughter with the accessible opportunity to expand on her education in the long run. P2's brother picked up and dropped him off in his car at the college and then went to his workplace. After

completing the Lahore Orange Line Metro Train (OLMT) in 2020, P2 used it for daily travelling as the new transport system was accessible for wheelchair users.

P1 could not use the college bus for transport because it was inaccessible for people in a wheelchair. Without any alternative means of transportation, she could not reach the college.

P1's father hired a private van to transport his daughter, but independence was reduced due to her dependence on someone to lift her into the vehicle, which still represented a s issue for her. P1 stated:

> At home, my father shifted me on the front seat of the van, and the folded wheelchair was kept at the back seats of the van. In college, my friends shifted me from the van to the wheelchair. If my friends were not available, then the driver of the van helped me in shifting. However, this experience was uncomfortable for me.

The inaccessible public transport and the college bus made it difficult and uncomfortable for P1 to access the college independently because she faced gender-related cultural issues due to her discomfort at needing to be physically assisted by a male who was not a member of her family.

In responding to the question of the availability of accessible transport in the AU College, P2 commented:

> In the beginning of my educational career, I faced many challenges when moving around to the AU College. The college bus is accessible for visually and hearing-impaired students as they provided attendants on the bus for assistant. Yet, for students in wheelchair, these buses have zero accessibility. At same the time, the Lahore Orange

Line Metro Train was constructed near my residence. Then my brother took responsibility for picking up and dropping off me to the college.

Lack of Awareness About the Needs of SWPDs

P1 had no access to the PW College bathroom due to either the width of the door or the facility being located on another floor without lifts. She knew this bitter reality and always tried to manage herself. P1 commented:

> My water intake was very low during the college timings because I had to control pee
> for a long time. During my menstrual cycle, I preferred to stay home.

Once she desired to access the toilet facility. The faculty member in charge of the staffroom allowed her to use it, but the bathroom structure prevented her from using it as the doorway was too narrow for her wheelchair to pass through. Consequently, it can be seen that the college administration and teachers did not recognise the circumstances and the implications for P1, who was at high risk of inadequate sanitation and hygiene facilities.

In contrast, the CSS team in P2's college were continuously trying to increase the awareness of the administration about the fundamental issues of SWDs. However, there were still difficulties with the bathroom because, as P2 mentioned during the interview:

> I feel it difficult to use the accessible bathroom facility because I always need a personal
> assistant going to the bathroom.

Due to these ongoing obstacles for SWDs, the students using wheelchairs are being forced to demand full-time personal assistants. Lack of awareness about the real needs of students with disabilities has become a significant concern for them in pragmatic everyday terms. In the PW College, the administration and teachers are not aware of the real disability issues

and consequences. For example, they do not investigate the reasons that female students with disabilities are facing regular interruptions to their education. These attitudes contrast with circumstances in the AU College where the CSS team continuously creates awareness and knowledge about disability issues by promoting disability awareness talks and seminars. These activities may assist in sensitising the administrators, teachers, and non-disabled students on these grass roots problems and enable them to develop knowledge about how to interact with SWDs.

Resilience Facing Different Attitudes

P1 shared her experience of struggles for education despite her dependent mobility, commenting that:

> If my friends were absent, then the van driver helped me to shift from wheelchair to the van. These experiences made me feel uncomfortable, but I persisted, despite every day being hard just to get to the college.

Additionally, she stated:

> I confronted many difficulties to take external exam. The examination centre was inaccessible for me. The staff of the examination centre were unaware about disability adjustments. The superintendent appreciated my passion but refused to take each examination on ground floor because they had limited invigilators.

Then P1 had to be carried by her father to the third floor for every examination because there was no elevator in place for her to reach the first floor. Had the examination been held on the ground floor, accessibility would not have been a problem, which demonstrates how lack of accommodation and consideration of PWDs everyday obstacles can be overcome by improved policy formulation and implementation in colleges. Completion of her education

was essential for P1, so she persisted despite the attitudes and ignorance causing her difficulties.

Circumstances were different for P2, who experienced some autonomy by travelling on the OLMT. However, he disliked the reception from the public on the trains and on roads which he was forced to endure through their gestures and vocalised expressions towards his disability. In Pakistan, disability is not accepted as a normal condition in a diverse society, rather it is often considered as taboo and a curse arising from the sins of the parents or from previous incarnations. Hence, persons with obvious disabilities such as P2 who travel on public transport or appear in public areas may be subjected to ridicule and harassment, which creates a sense of anxiety and vulnerability for them.

While studying in mainstream colleges, P1 and P2 faced multiple difficulties in facilities, lack of understanding of the impact of obstacles on their education, and a range of attitudes, including some negative and lacking encouragement, from the public, the college, and the examination staff. Focusing on their primary objective of acquiring a quality education, they always tried to ignore these behaviours.

Support Mechanisms for SWDs

While studying in the AU College, P2 felt a sense of independence, since it is considered the best institution for SWDs to benefit from inclusive educational practices. In 2008, the AU College established a Centre for Special Students (CSS). The centre specialises in college and university level education to eliminate barriers faced by SWDs and is a first of its kind in Pakistan. As P2 identified:

In the AU College, more than 150 students with disabilities are enrolled from Intermediate to PhD level. These students are registered in the Centre of Special

Students with the aim to overcome the educational barriers faced by SWDs in the college.

The CSS offers basic educational facilities, such as computer training, audiobooks, braille magazines and dictionaries for visually impaired students, and arranges disability awareness walks and inclusive games. These activities seem to sensitise the administrators, teachers, and non-disabled students on interacting with SWDs. The CSS focused on the challenges faced by impaired students in the AU College and negotiated new and improved strategies with the administration to overcome them.

The case for P1 was different since she could not find any support system like the CSS in the PW College because it is operated under a hierarchical and central system. The administration of the PW College has little autonomy in their financial and administrative matters, and inclusive practices are not considered a priority in their business plan or management arrangements. In contrast, after attaining independence and being elevated in status to a university, the AU College works under an independent governing body and has much greater liberty in prioritising its financial resources. Through the advocacy and recommendations of the CSS, the administration of the AU College provides facilities and resources to SWDs to ensure inclusive practices where feasible.

Hindrance in Taking Public Exams

P1 and P2 faced multiple challenges to take Higher Secondary Certificate Exams (HSCE) at an intermediate level. The writing speed of both P1 and P2 was slow due to their impairment, and it was difficult for them to complete the paper within the allocated time. They also faced many hindrances to organise a scribe. As P1 said during the interview:

I have to personally organise a writer for myself. To search for a writer and to seek

their acceptance to accompany me during this time is challenging for me.

Despite the general environment of inclusive practices of CSS, P2 also found that organising

a scribe was difficult:

Some students agree to assist me in writing, then to fulfil the conditions of the Board of

Intermediate and Secondary Education (BISE) are also tiring tasks. These conditions

are for writer to be two grades junior student, provide NOC from his own school/college,

photographs.

Obtaining formal approval from the Board of Intermediate and Secondary Education (BISE)

for a scribe or writer to assist them was also a significant challenge for both P1 and P2. If

the BISE staff were not satisfied with any conditions, they spontaneously rejected the writer,

which was difficult for SWPDs during tough examination times. P1 also indicated the

competency of the writer in attempting exams was often a problem:

To search for a writer who meets the selected criteria needs to understand the content

and the terminology of higher educational practices, which can pose extra challenges

for me.

P2 identified a further obstacle with the time constraints in satisfying the rules for

attempting exams. These restrictive requirements further restricted their list of potential

candidates who could assist. Since the public examination system is not inclusive, P1 and

P2 faced challenges concerning extra time, provision of a writer and accessibility of the

examination centre, which affected their results or grades. Consequently, their reliance on

those writers during exams, and the limitations on time allowed to complete the exams, typically left them with a lower percentage result, through no fault of their own.

Family Support

P1 acknowledged the support of her parents for accessing her education. When she studied in a neighbouring school, her mother always supported her mobility back and forth to home. After matriculation, she enrolled in a public college, which was located far away from her home. The inaccessible public transport and the college bus also proved challenging for her parents. As P1 indicated:

> My father was working in a public bank, and picking and dropping me from home to college on a regular basis became impossible for him. So, he decided to expend more to continue my education by hiring a private van.

P1 knew many other girls with disabilities who left their education due to unfriendly vehicle access processes and limited financial resources. Hence, she was grateful for the support of her father without which she would not have been able to complete her HSCE.

According to P2, he was indebted to his brother for support of his studies at the AU college during the ongoing construction of the OLMT:

> We chose the longer and narrower traffic routes, primarily due to the traffic congestion on the main roads. My brother always exhibited resilience, persistence, and support for me keeping my learning on campus.

In the form of physical or financial aid, family support was a crucial aspect for both P1 and P2 in their success in obtaining an education and socialisation within the community.

4.7   Chapter Summary

In this chapter, the barriers faced by P1 and P2 were similar in terms of inaccessibility and attitudes in their respective colleges. However, the degree with to which the two students experienced these obstacles differed somewhat according to the administrative and governance characteristics of their colleges. In P1's PW College, there was limited awareness about disability issues and, as a female student studying in a public college, she faced multiple instances of discrimination and difficulty with accessing education. In contrast, P2 was studying in an autonomous college operating under an independent governing body. After the formation of the CSS, the administration, teachers, and non-disabled students in the AU College have become noticeably more sensitive about disability issues. With the collaboration of the CSS, the administration of the AU College is pursuing inclusive educational practices and this has been seen as beneficial for SWDs who are attracted to enrol at the AU College due to its reputation as an inclusive institution.

5. Discussion

5.1 Introduction

Chapter 4 outlined the research results of both the online survey and semi-structured interviews. The quantitative data was collected from current or former SWPDs studied in mainstream colleges to understand general obstacles to the implementation of inclusive education. The qualitative data was collected from the in-depth interviews with two students with physical disabilities. The chapter also discussed the themes of accessibility and barriers to SWDs at college premises, including transportation and mobility challenges encountered, attitudinal barriers faced, and coping strategies employed. It also included real examples of learning difficulties and challenges in appearance for exams, opportunities for inclusive educational practice in colleges, and system-wide barriers to implementing an inclusive education framework in Pakistan.

5.2 Accessibility and Barriers in College Premises

In Pakistan, to continue education at Graduation or Master levels, students with physical disabilities enrol at either public or autonomous /private (HEIs). However, in these HEIs, SWPDs encounter different experiences in terms of accessibilities and barriers in the built environment, as indicated by these research findings. The survey results showed that 67.3% of SWPDs from public colleges and 58.3% of SWPDs from private/autonomous colleges found mobility challenges due to the nature of building designs of the colleges, which were not disabled-friendly. The interviews highlighted that Participant 1 (P1) only found one toilet block located on the ground level in the main building of the PW College, which was accessible for her wheelchair. Moreover, P1 encountered barriers to access upstairs classes, the college canteen, the college library, and the college toilet. This finding

is consistent with those of Farooq (2012) and Awais and Ameen (2017) who found that students using wheelchairs did not have easy access to classrooms and basic amenities due to stairs and narrow walkways in the Pakistan educational context.

The lack of accessibility and disabled-friendly infrastructure found in those institutions hinders the free and adequate mobility of SWPDs. For example, in the libraries, the desks or tables and chairs are not customised to fulfill the basic needs of SWPDs. The height of shelves and lockers are above the height easily accessible from a wheelchair which creates challenging conditions to search for books independently. Participant 2 (P2) found that the newly constructed buildings were accessible for him because of the use of ramps and elevator(s), including two accessible bathrooms. However, P2 had restrictions within the main library, the examination hall, the bookshop, and the computer lab in the main or older historical building. Recently, Tudzi et al.'s (2020) study in Ghana also found that students with special needs have mobility challenges because of the inaccessibility of the HEI built environment. In the higher education system in Croatia, Milic Babic and Dowling (2015) observed that for students in wheelchairs, the doorways of classrooms and lecture halls were narrow and inaccessible. Most classrooms and lecture halls had only one entrance, and students in wheelchairs had to find space on back seats, which made it difficult for them to listen to the lecture and see the whiteboard or multimedia screen. Likewise, toilets were not adapted for students in wheelchairs to readily access the kinds of facilities usually taken for granted by non-disabled students and faculty members. Munir (2021) also concluded that in two HEIs in Karachi, the study completions rate of students with physical impairments was meagre due to the difficulties faced in the learning environment, which disadvantages SWDs in both physical and academic ways.

5.3 Transportation/Mobility Challenges Encountered

Transport is considered an essential criterion for easy and effective access to facilities and opportunities. In developing countries like Pakistan, independent mobility of persons with disabilities is a significant barrier due to the non-availability of disabled-friendly vehicles and the inaccessibility of local public transportation. The survey results of the first phase of this study revealed that travelling to a college and returning home was a major concern and obstacle for students with physical impairments. As seen in the results, 75% of SWPDs from public colleges and 83.3% of SWPDs from private/autonomous colleges were confronted by significant hurdles due to the inaccessibility of the college bus. Students with physical disabilities using wheelchairs also encounter difficulties travelling to and from schools or colleges because roads, paths, and bridges in Pakistan are often unsuitable or dangerous for people using wheelchairs. In such circumstances, distance and safety during travel become overwhelming challenges for them effectively preventing their independent movement (Education for All & UNESCO, 2010). Since PWDs cannot use public transport due to inaccessible designs, they become dependent on their families or are forced to use private vehicles for travelling, which places a financial burden on them and their families (Munir, 2021).

The interview findings revealed that P1 and P2 both faced transport accessibility challenges because they could not use typically configured public buses or vehicles. Even if dedicated disabled-friendly vehicles are available, they are not sufficient in number, and most SWDs could not reach their institutions in time for classes (Milic Babic & Dowling, 2015).

Women with disabilities face multiple transport-accessibility challenges in Pakistan through disability, gender, and family economic status, as happened with P1. In the case of

girls or women with disabilities, parents are more caring and worried about their safety, especially when they need help moving around. If they belong to a low-income group and their family cannot arrange a private vehicle for them, their opportunities for education and employment automatically become minimised. Typically, parents do not have enough time for picking up and dropping off their disabled daughters at educational institutions or workplaces. This outcome often results in women and girls with disabilities being confined to their homes with limited opportunity for higher education or pursuit of a career (The British Council, 2014).

5.4 Attitudinal Barriers Faced and Coping Strategies Employed

The behaviours of the administrators, teachers, classmates and even family members affect the inclusion of SWDs in mainstream institutions (Kvam & Braathen, 2006). The survey findings showed that the college administration and teachers had a general lack of understanding or concern for the special needs of SWDs. Findings from public colleges showed that 44.9% of SWPDs and private/autonomous colleges showed that 45.8% of SWPDs disagreed that administration and teachers understood their particular needs related to their disability. This suggests that there is a significant and similar problem in both government and private institutions. Similar findings were apparent in the interviews, as P1 felt discriminatory attitudes when attempting to pursue her dreams of studying a Fine Arts subject located upstairs, which was impossible for her to reach. Therefore, teacher attitudes and their general lack of understanding of the special needs of SWDs are significant elements that affect the success of the inclusion process and inclusive learning in GEIs (Kazimi & Kazmi, 2018).

In addition, P1 shared the challenges she confronted concerning accessing sanitary facilities while completing her education due to the intersection of disability and gender.

Disability is a broad concept, and to establish a proper system of inclusivity in classrooms, teachers must consider and understand a wide-ranging definition of disability (Zahid et al., 2018). After completing the Lahore Orange Line Metro Train in 2020, P2 was able to travel independently on the metro train as it was accessible for wheelchair users. Whilst travelling on OLMT, he often faced unfriendly behaviours from passengers, sometimes considering him as abnormal. Primarily this perceived perception stems from society's lack of knowledge and exposure to disabilities.

In South Asian societies, the social construction of disability is founded on a wide range of socio-economic, religious, and cultural factors. In Pakistan, disability is often explained as the result of violating nature, breaking social norms or spiritual orders, which ultimately results in society's rejection and misunderstanding being orientated towards people with disabilities (Siska & Habib, 2013). Thus, disabled people commonly face discrimination and the social stigma and negative social attitudes due to their disabilities. They are generally disrespected and rarely function as valued members of society. In Asian disability history data, the most old-fashioned words appear as standard for searching disability, and some examples are: *Alms, Beggar, Blind, Charity, Deaf, Deficiency, Deformed, Dumb, Dwarf, Fools, Handicap, Infirmity, Karma, Mad, Medical, Punishment, Welfare* (Miles, 2001).

In Pakistan, disability has some different interpretations due at least in part to a conflict between entrenched superstitious myths and Islamic religious belief. Some believe that disability is a curse from God and atonement through charity or visits to shrines can help to compensate for transgressions. Some view disability as a punishment for people's sins, while others consider disability great shame and feel guilt for the affected family. As a result,

people often hide their disabled family members from the general public (Idrees & Ilyas, 2012).

However, these ignorant perspectives are not at all consistent with Islamic teaching, which is the predominant religious belief in Pakistan. According to the two primary roots of Islamic teachings, the *Quran,* and *Hadith* (Words of Prophet Muhammad), persons with disabilities have the same rights and deserve the same respect as non-disabled persons. Their physical conditions are neither viewed as a curse nor a blessing but are simply part of the human condition. The *Quran* eliminates any stigma or discrimination concerning disabilities. It is confirmed from Islamic history that Prophet Mohammad (PBUH) took special care to ensure the inclusion of people with disabilities in religious practices. However, the attitudes of people is Pakistan are often influenced as much by traditional customs, cultural myths, and social norms as they are by religious belief (Rathore & Mansoor, 2019). Therefore, the way disability is defined and understood will have a significant impact on how policies are framed and implemented. As a consequence, how people perceive inclusive education also has a tremendous impact on how legislation is implemented (Kamenopoulou & Dukpa, 2018).

5.5   Learning Difficulties and Challenges in Appearance for Exams

Institutional policy plays an essential role in the promotion and inclusion of students with disabilities. Many elements can contribute to and accelerate the process of inclusion. These elements relate to access to information, assessment, curriculum and pedagogies, teacher training programs, funding, budgeting, and administration governance (Caceres et al., 2010). The survey findings of the research showed that 73.8% of SWPDs disagreed that teachers planned their lessons according to their special needs, and 60% of SWPDs also disagreed that their teachers were familiar with different ways of communication to students

with disabilities. In addition, SWPDs also faced learning difficulties in the classrooms, such as the difficulties in note-taking during the lecture (agreed by 75.4% SWPDs), the problems to participate in class discussions (decided by 49.2% SWPDs) and given preferences to participate in extra-curricular activities (49.2% SWPDs disagreed). The main reasons for this exclusion are that classroom settings do not accord with those students' individual and special needs, and teachers are not professionally trained to support SWDs. Therefore, SWDs face learning barriers while listening and watching lecturers and writing notes due to the non-availability of assistive devices. They have problems participating in group work, oral presentations, and fieldwork because of isolating behaviours of their peers (Chimedza & Peters, 2001). They also experience difficulties completing coursework, assignments and annual assessments on time because of nervousness, anxiety, and frustration arising from their impairments (Fuller et al., 2004).

The interviews revealed that P1 and P2 faced multiple challenges to take the HSCE at intermediate level due to lack of accessibility of the examination centre, difficulties in arranging for a scribe, and reluctance of examiners to allow an allocation of extra time, which affected their exam results. Students with physical disabilities also faced many challenges to participating in public exams. If students with physical impairments are provided with special arrangements during examinations (e.g., provision of a writer), these were difficult to arrange and may not overcome the disadvantages PWDs face in taking conventional exams designed for students unhampered by disabilities (Hammad & Singal, 2015).

Therefore, SWPDs have often had to adapt to the teaching environment with little or no assistance, a situation that puts them at an academic disadvantage (The British Council, 2014). The leading cause of the theoretical loss is that in Pakistan pre-service and on the job training of regular teachers does not include familiarisation with the education of SWPDs

and those who are gifted (Atique & Mushtaq, 2005). There is also an absence of professional development training in collaborative initiatives to foster the implementation and use of assistive technology in a classroom for both teachers and administrators (Ashfaq & Rana, 2015). Thus, teachers working in mainstream institutions have little or no awareness and experience of those kinds of students' needs, challenges, and capabilities (Atique & Mushtaq, 2005). Further, teachers often do not have enough resources and time to support SWDs as they are not well trained to understand their basic needs (Chimedza & Peters, 2001).

5.6   Possible Inclusive Educational Practices in Colleges

In the resource-constrained environment of Pakistan, inclusive institutions are most cost-effective compared to segregated institutions for students with special needs. In addition, inclusive classrooms are more beneficial for socialisation and the realisation of self-worth. Finally, with a well-designed curriculum and trained and qualified teachers with adequate, accessible infrastructure, students with and without disabilities can flourish in the same learning environment (The British Council, 2014). Inclusion could be seen as a process because it requires identifying and removing barriers to learning and quality education (Kazimi & Kazmi, 2018). The education quality in mainstream institutions might be increasingly adequate compared to segregated institutions; the learning environment is inaccessible for SWDs in many cases in terms of infrastructure, social inclusion, attitudes, and teaching practices (The British Council, 2014). There is a need to change the paradigm of inclusive education. Inclusion does not mean only structural change. There is a need to change the approach from market-based education to humanistic-oriented education (Siska & Habib, 2013).

This research revealed that in public colleges, SWPDs are still facing many obstacles. These public colleges are working under a centralised system under the surveillance of HED, and inclusion is absent from the policies and strategies of HED. However, autonomous/private colleges pursue certain inclusive educational practices as they work under independent financial and management bodies as experienced by P2. In the AU College, P2 found a Centre of Special Students, established in 2008, in conjunction with the immense efforts of students with visual impairments. The primary purpose of the CSS is to create awareness through various activities that sensitise administrators, teachers, and peers on how to adjust and accommodate SWDs in the AU College. The CSS focused on the challenges faced by students living with disabilities in the AU College and negotiated new

and improved strategies with the administration to overcome them. Therefore, inclusive educational practices in mainstream institutions could be possible through identifying disabilities, sensitisation of administration and teachers about disabilities, and changing the physical structure of the institutions (The British Council, 2014).

5.7 System-Wide Barriers to Implement Legal/Policy Framework in Pakistan

Before ratifying the Convention on the Rights of Persons with Disabilities, the Pakistan Government took extensive measures to bring persons with disabilities into mainstream public activities. In this regard, Pakistan enacted laws such as the Disabled Persons (Employment and Rehabilitation) Ordinance, 1981, The National Policy for Persons with Disabilities, 2002, National Plan of Action (2006), Special Citizen Act, 2008 and Special Citizens (Right to Concession in Movement) Act, 2009 (Gul, 2020).

After signing and ratifying the UNCRPD in 2010, Pakistan had a clear direction for local-level legislation. After lobbying and advocacy from all stakeholders of the disability movement, the ICT Right of Persons with Disability Act, 2020, was passed by the National Assembly to protect the rights of persons with disabilities (National Assembly Pakistan, 2020). However, for any developing country like Pakistan, where laws and international treaties are upheld but where resources are limited due to the country's foreign debt and reliance on international aid, establishing any disability laws or acts is not the end of the process. The disability laws must be implemented and monitored to ensure their effectiveness, which has not happened in Pakistan (Siska & Habib, 2013).

In addition, in many developing countries, including Pakistan, education for children with disabilities is dealt with by separate ministries divided along lines, such as Health, Social Welfare, or Social Protection (Lewis, 2009). Prior to the 18th Amendment to the Constitution in 2010, in Pakistan, many issues relating to disability were dealt with by the Ministry of Social Welfare and Special Education at the Federal level. After devolution, the division of legislative powers on various issues had been altered, including social welfare, mental illness, workers' welfare, employer liability and education. Since disability is a cross-departmental issue, these powers and functions were shared with the Departments of Human Rights and Women's Development (The British Council, 2014). Therefore, due to disconnection across the various government ministries, concrete plans, and strategies for including SWDs become problematic. That disconnect between ministries and the areas for which they are responsible could further segregate SWDs and shift the focus from education and equal opportunity to medical care and social isolation (World Health Organization, 2011).

In addition, the enacted laws in developing countries are often poorly implemented due to weak monitoring and observation or reporting systems. For example, in Pakistan, the Disabled Persons (Employment and Rehabilitation) Ordinance 1981 specified that at least 2% of the total workforce should consist of persons with disabilities. However, in practice, it has had no practical implications. Bangladesh has enacted the Rights and Protection of Persons with Disabilities Act 2013, which covers 11 impairments, but the government has ignored its implementation (The British Council, 2014). Therefore, the weaker influence of the legal framework, lack of awareness about disability issues, poor monitoring system and disconnect between ministries are system-wide obstacles to implementing inclusive policies in developing countries.

5.8   Chapter Summary

This chapter discussed the quantitative and qualitative results of the research and their implications. The study highlights the challenges of undergraduate students with disabilities at higher educational institutions concerning adjustments and difficulties faced to access college premises, transportation, attitudes, learning, and participation in exams. Furthermore, the chapter has drawn attention to system-wide barriers for implementing inclusive legal and policy frameworks and possible options of inclusive educational practices at grassroots levels in colleges. The next chapter includes the study's conclusion, limitations and implications for future research and recommendations.

6. Conclusion

6.1 Introduction

The purpose of the study was to examine the obstacles that students with physical impairments face in mainstream colleges in Pakistan's Punjab region. The study focused on the structural, attitudinal, educational, and system-wide barriers that prevented inclusive practices at general colleges, considering the social model of disability. The first chapter addressed misconceptions about disability and the factors that lead to people with disabilities becoming excluded from society. Additionally, students with disabilities encountered challenges at general educational institutions due to a lack of inclusive policies and approaches. Therefore, the research questions investigated the challenges that potentially existed for students with physical disabilities, especially at the college-level entry in Pakistan. Chapter 2 explored the research on disability models and the differences between general, special, and inclusive education. Finally, the principles of inclusive education, legislation and policies in Pakistan were highlighted in the literature of this study.

The third chapter described the study design used to answer the research questions. For this study, a sequential explanatory mixed-method technique was utilised. The quantitative data was acquired initially via an online survey, followed by qualitative data via online interviews, using a sequential strategy that combined two levels of techniques. The qualitative data was analysed using a phenomenological method to better understand the participants' experiences via their real-life experiences. Chapter 4 examined the results of both the online survey and the interviews. The structural, educational, and attitude barriers experienced by 80 SWPDs, were thoroughly discussed in the first phase. In the second phase,

online consultations with two students with physical disabilities were performed further to understand the problems from gender and college type viewpoints.

Chapter 5 focused on the discussion of many themes that emerged from online surveys and interview data analysis. The emerging themes were:

1. Accessibility and barriers in college premises

2. Transportation and mobility challenges encountered

3. Attitudinal barriers faced and coping strategies employed

4. Learning difficulties and challenges in appearance for exams

5. Possibilities of inclusive educational practice in colleges

6. System-wide barriers to implementing legal and policy framework in Pakistan.

The main objective of the sixth chapter is to present the conclusion, implications, and recommendations of this research.

6.2   Overview of the Research and Findings

The research findings highlight the specific challenges faced by students with disabilities, including the physical, attitudinal, and academic environments in mainstream colleges in Pakistan. Furthermore, the study investigated specific elements of incorporating inclusive learning by describing the experiences of pupils with physical impairments in mainstream colleges in Pakistan. The study also offers several enhancements that might benefit students with physical limitations and improve the inclusion process.

The findings of the study in relation to the two research questions are as follows:

1. What are the main obstacles faced by SWPDs in colleges due to the lack of an inclusive framework in Pakistan?

The main obstacles faced by current or former SWPDs in mainstream colleges are structural, educational, and attitudinal. The participants encountered several barriers in infrastructure, mobility, attitudes, and access to public examinations. The study reveals that the nature of the college building designs makes them inaccessible to disabled people. Students with wheelchairs have difficulty accessing essential services and facilities in the colleges, such as the canteen, library, restroom, examination hall, bookshop, and computer lab, due to limitation of stairs, absence of lifts, and narrow passageways restricting their movement.

Transportation accessibility was found to be a major obstacle, which limited mobility and learning flexibility of SWPDs. Learning problems in lectures and hurdles in participating in public examinations, such as poor examination centre accessibility, difficulties in arranging for a scribe, and refusal of additional time, were revealed as serious obstacles impacting the academic achievements of SWPDs.

The most significant factors affecting the effectiveness of the inclusive process and teaching at mainstream colleges were teacher attitudes and lack of knowledge of the particular needs of SWPDs in the learning environment. The absence of any professional development training in connection to the experience of the problems and capacities of students with special needs is the primary reason for this inadequacy. Interviews with two SWPDs suggest that autonomous colleges may be more effective in providing for the specific needs of PWDs in an inclusive environment, in comparison to public colleges since their administration and faculty members have not had the benefit of disability advocacy and awareness programs on campus.

According to the findings, female students with disabilities experience significantly greater transportation-accessibility obstacles due to multiple disadvantages of their

impairment, gender discrimination, and family's economic status. They also endure many forms of prejudice due to the intersection of disability and gender in respect to mobility and health difficulties, which disrupts their studies.

The study suggests that physical access is essential for SWPDs to participate in learning and social interactions. When they are free of physical, mental, and educational limitations, SWPDs can flourish in the nurturing inclusive environment. However, in Pakistan, the legislative framework meant to establish inclusive education has had only a negligible effect. There are insufficient monitoring mechanisms, and there is a disconnection across ministries, all of which are substantial system-wide impediments to promoting inclusive policies.

2. How might a framework of inclusive learning be imagined at the grassroots levels in colleges?

According to the study's findings, establishing the Centre for Special Students at the autonomous college was shown to be valuable and advantageous in promoting inclusive educational practices. The Centre is a first of its type in Pakistan, focusing on college and university-level education to help students overcome obstacles arising from their visual, physical, or hearing impairments. The CSS negotiates with the administration for new and improved approaches to resolve the issues and barriers experienced by SWDs at the college. The Centre provides essential educational services for visually challenged students such as computer training, audiobooks, braille publications, and dictionaries. The CSS also supports disability awareness walks and inclusive games. Administrators, instructors, and non-disabled students appear to be more aware of engaging with SWDs after participating in these activities.

Based on the experience of the CSS, it is an encouraging sign that inclusive educational practices are possible in public colleges if appropriate resources and supports are provided. Through specialised and technical support of a disability or special centre, the needs of faculty members and SWDs can be accommodated. The voices of the primary stakeholders are critical as the notion of inclusive education is simultaneously understood and implemented. Their lived experiences must be used to enlighten and assist policymakers to make the colleges genuinely inclusive.

6.3   Implications of the Study

In the corpus of literature on inclusive education needs in the twenty-first century, research on the challenges and accommodations for students with physical impairment has become a topic of significant interest. Only a few studies have been conducted in Pakistan to investigate the discriminatory barriers experienced by students with physical disabilities in mainstream educational institutions (e.g., Farooq, 2012; Ghouri et al., 2010; Khan et al., 2017; Safder et al., 2012). Although the studies focused on public schools and universities, they did not investigate the challenges students with physical impairments face in colleges. This research aimed to uncover the experiences and perspectives of SWPDs enrolled in mainstream colleges in Pakistan's Punjab province. Therefore, this research mainly contributes to the understanding and practices of inclusive education in public colleges in Pakistan, but may have implications for higher education institutions in other developing countries where persons with disabilities experience similar barriers to their attainment of a quality education.

The study has diverse implications for government policymakers, the higher education department, institutions, and teachers at public colleges. At the policy level, the study can help policymakers understand the challenges encountered by students with

physical disabilities and might therefore assist them in creating inclusive policies at higher educational institutions. The research also supports the higher education department to formulate and implement a disabled-friendly plan for students with impairments at general colleges. Furthermore, this research can assist college administrators and teachers in developing measures to support and accommodate students with physical limitations on campus. An inclusive learning environment can be developed and flourished at the institutional level through a disability advocacy and awareness special centre that cooperates with faculty and administration to improve attitudes and approaches to inclusive education.

6.4   Recommendations

Several recommendations emerge from the findings of this study for resolving the obstacles experienced by undergraduate students with physical impairment in Pakistan:

1. The media may play a significant role in raising awareness and advocating for solutions to the challenges of pupils with special needs. A mass media campaign could be launched through electronic, print, and social media platforms to raise awareness and advocacy for inclusive education. Problems experienced by pupils with special needs should be used as a moral and ethical reminder of the need to remove obstacles and enhance the whole education system by addressing student diversity and a chance to experiment with more effective pedagogical measures that serve all students.

2. In general, colleges need large-scale training programs to create an inclusive learning environment, which provides information to presently serving administration and teachers about inclusive educational practices. Teachers may be the most effective lever for changing the public's attitude about students with special needs. Their training has the potential to make a beneficial difference in

the education sector. Introductory courses focussing on IE should be included in faculty training programs, such as B.Ed., M.Ed., with the help of the Higher Education Commission and its affiliated institutions. A training program should be designed to identify the timeline for commencing the needs of physically challenged students in regular colleges in the most efficient, reasonable, and cost-effective manner.

3. To change Pakistan's general and special education system to an inclusive education system, all stakeholders in the education sector must work together. The HEC should consult with the Ministry of Social Welfare and Special Education and disabled persons' organisations (DOPs) to form steering committees to effectively implement IE policies and to accommodate students with disabilities in public higher educational institutions.

4. Future research on the topic of inclusive education in Pakistan should focus on the experiences of students with visual and hearing disabilities and on inclusive education practices in colleges located in small communities and remote areas, as these are understudied areas of research that may reveal more about the inclusivity phenomenon taking place in Pakistan.

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Appendix A   Ethics Approval

Flinders
UNIVERSITY

HUMAN ETHICS LOW RISK PANEL
APPROVAL NOTICE

Dear Dr Bev Rogers,

The below proposed project has been approved on the basis of the information contained in the application and its attachments.

Project No: 4090

Project Title: Obstacles faced by Students with Disabilities (SwD's) in Colleges due to lack of an inclusive education framework in
Pakistan.

Primary Researcher: Dr Bev Rogers

Approval Date: 04/02/2021

Expiry Date: 31/10/2021

Please note: Due to the current COVID-19 situation, researchers are strongly advised to develop a research design that aligns with the University's COVID-19 research protocol involving human studies. Where possible, avoid face-to-face testing and consider rescheduling face-to-face testing or undertaking alternative distance/online data or interview collection means. For further information, please go to https://staff.flinders.edu.au/coronavirus-information/research-updates.

RESPONSIBILITIES OF RESEARCHERS AND SUPERVISORS

1. Participant Documentation

   Please note that it is the responsibility of researchers and supervisors, in the case of student projects, to ensure that:

   * all participant documents are checked for spelling, grammatical, numbering and formatting errors. The Committee does not accept any responsibility for the above mentioned errors.

   * the Flinders University logo is included on all participant documentation (e.g., letters of introduction, information Sheets, consent forms, debriefing information and questionnaires – with the exception of purchased research tools) and the current Flinders University letterhead is included in the header of all letters of introduction. The Flinders University international logo/letterhead should be used and documentation should contain international dialing codes for all telephone and fax numbers listed for all research to be conducted overseas.

2. Annual Progress / Final Reports

   In order to comply with the monitoring requirements of the *National Statement on Ethical Conduct in Human Research 2007 (updated 2018)* an annual progress report must be submitted each year on the approval anniversary date for the duration of the ethics approval using the HREC Annual/Final Report Form available online via the ResearchNow Ethics & Biosafety system.

   Please note that no data collection can be undertaken after the ethics approval expiry date listed at the top of this notice. If data is collected after expiry, it will not be covered in terms of ethics. It is the responsibility of the researcher to ensure that annual progress reports are submitted on time; and that no data is collected after ethics has expired.

   If the project is completed *before* ethics approval has expired please ensure a final report is submitted immediately. If ethics approval for your project expires please either submit (1) a final report; or (2) an extension of time request (using the HREC Modification Form).

   For student projects, the Low Risk Panel recommends that current ethics approval is maintained until a student's thesis has been submitted, assessed and finalised. This is to protect the student in the event that reviewers recommend that additional data be collected from participants.

3. Modifications to Project

   Modifications to the project must not proceed until approval has been obtained from the Ethics Committee. Such proposed changes / modifications include:

- change of project title;
- change to research team (e.g., additions, removals, researchers and supervisors)
- changes to research objectives;
- changes to research protocol;
- changes to participant recruitment methods;
- changes / additions to source(s) of participants;
- changes of procedures used to seek informed consent;
- changes to reimbursements provided to participants;
- changes to information / documents to be given to potential participants;
- changes to research tools (e.g., survey, interview questions, focus group questions etc);
- extensions of time (i.e. to extend the period of ethics approval past current expiry date).

To notify the Committee of any proposed modifications to the project please submit a Modification Request Form available online via the Research Now Ethics & Biosafety system. Please note that extension of time requests should be submitted prior to the Ethics Approval Expiry Date listed on this notice.

4. Adverse Events and/or Complaints

Researchers should advise the Executive Officer of the Ethics Committee on 08 8201-3116 or human.researchethics@flinders.edu.au immediately if:

- any complaints regarding the research are received;
- a serious or unexpected adverse event occurs that effects participants;
- an unforeseen event occurs that may affect the ethical acceptability of the project.

Yours Sincerely,

Hendryk Flaegel

on behalf of

Human Ethics Low Risk Panel
Research Development and Support
human.researchethics@flinders.edu.au
P: (+61-8) 8201 2543

Flinders University
Sturt Road, Bedford Park, South Australia, 5042
GPO Box 2100, Adelaide, South Australia, 5001

http://www.flinders.edu.au/research/researcher-support/ebi/human-ethics/human-ethics_home.cfm

ResearchNow
Ethics & Biosafety

Flinders *Proactively supporting our Research*

Appendix B   Flyer for Online Survey

Research Title: Obstacles faced by Students with Disabilities (SWDs) in Colleges due to lack of an inclusive education framework in Pakistan

Request for research participants:

Dear friends I am doing my Master of Education (Leadership & Management) from Flinders University, Adelaide. For my research I have designed a survey that looks at structural, attitudinal, and educational obstacles faced by physically disabled students in Colleges due to lack of an inclusive educational policies and practices in Pakistan. If you are 18 or above, physically disabled and are studying (current student) or studied (ex-student) in a public, private or autonomous College, you will be asked to complete a survey that will take around 20 minutes. If you are willing to take part, please follow the below link to take part in the study.

https://qfreeaccountssjc1.az1.qualtrics.com/jfe/form/SV_e4jbu9oo7nxDc8K

Thank you.

This research project has been approved by the Flinders University's Human Research Ethics Committee (Project ID 4090). For queries regarding the ethics approval of this project, or to discuss any concerns or complaints, please contact the Executive Officer of the committee via telephone on +61 8 8201 3116 or email human.researchethics@flinders.edu.au

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Appendix C   Online Survey Questionnaire

PARTICIPANT INFORMATION SHEET FOR SURVEY

Research Title: Obstacles faced by Students with Disabilities (SWDs) in Colleges due to lack of an inclusive education framework in Pakistan.

Researcher: Ms Saira Ayub (Student of Master of Education Leadership & Management), supervised by Dr Bev Rogers.

What is this research about: The research is studying the hurdles faced by physical disabled students in Colleges due to the lack of an inclusive learning policies and practices in Pakistan.

Who is conducting the research?

The study is being conducted by Ms Saira Ayub a student of Master of Education (Leadership & Management) from College of Education, Psychology and Social Work at Flinders University.

How can you take part?

If you are 18 or above, physically disabled and are studying (current student) or studied (ex-student) in a public, private or autonomous College, you will be asked to complete a survey that will take around 20 minutes.

Voluntary participation:

Your participation is voluntary, and you can change your mind at any time without consequences for you. If you change your mind while completing the survey, simply exit the survey.

Potential risks and mitigation strategies associated with the research:

There are minimal risks associated with your participation in this research. However, as the survey asks questions about physical disability related issues, there is a possibility that you may experience mild discomfort while completing some survey questions. If this happens and you do not want to continue, you can exit the survey.

Confidentiality:

Only researchers listed on this form have access to the individual information provided by you. Privacy and confidentiality will be assured at all times. The research outcomes may be presented at conferences, written up for publication or used for other research purposes as described in this information form. However, the privacy and confidentiality of individuals will be protected at all times. You will not be named, and your individual information will not be identifiable in any research products without your explicit consent.

No data, including identifiable, non-identifiable and de-identified datasets, will be shared or used in future research projects without your explicit consent.

Ethics approval: This study adheres to the Guideline of the ethical review process of the Flinders University's Human Research Ethics Committee (Project ID 4090). For queries regarding the ethics approval of this project, or to discuss any concerns or complaints, please contact the Executive Officer of the committee via telephone on +61 8 8201 3116 or email human.researchethics@flinders.edu.au

Benefits: Although you may not benefit directly from this research, your participation in this study will help in understanding the obstacles faced by disabled students in College life in Pakistan due to lack of an inclusive learning framework.

Thank you for your help with this important piece of research.

For more information please contact:

Saira Ayub

ayub0007@flinders.edu.au

If you wish to participate in the survey, kindly click yes to proceed.

Yes

No

<u>**Part A: Demographic Profile of Participants**</u>

Please request for you to share correct information and tick or highlight the relevant items.

Gender		Nature of Disability	
Male		Mild	
Female		Moderate	
Others		Severe	
College Type			
Public		**Physical Disability Type**	
Private/Autonomous		Polio effected	
		Muscular dystrophy	
Education Level		Spinal cord injury	
Intermediate		Spina Bifida	
Graduation		Cerebral palsy	
Both		Others	

<u>**Part B: Obstacles faced by Student with Disabilities at College Level**</u>

You are kindly requested to respond to the following questions by ticking or highlighting in

the appropriate column.

Sr.	Obstacles	1= Strongly disagree	2= Disagree	3= Neither agree nor disagree	4= Agree	5= Strongly agree
	Structural Obstacles					
1.	The College infrastructure is disabled friendly.					
2.	There are ramps for a disabled student to move independently.					
3.	There is a lift for a disabled student to go up levels in the College.					
4.	There are appropriate signboards and directions which makes it comfortable for a disabled student to navigate the campus.					
5.	Students with disabilities are facing hurdles to access for basic services (canteen, playground) in the College.					
6.	The College library is accessible for students with disabilities.					
7.	There is accessible toilet in the college for students with disabilities.					

3

8.	The doorways of classrooms are widened and have easy wheelchair access.				
9.	Students with physical disabilities can easily move in classrooms.				
10.	Students with disabilities have appropriate seating in classrooms.				
11.	Travelling from home to the College is a big concern for students with disabilities.				
12.	The College bus is accessible for students with physically disabilities.				
	Attitudinal Obstacles				
13.	The College administration understands the special needs of a disabled student.				
14.	As a student with disability, you feel inferiority complex in a mainstream College.				
15.	Students with disabilities feel social isolation in a mainstream College.				
16.	Mainstream college suits best to a student with disability than a special College.				
17.	Teachers provide special support to students with disabilities in classrooms.				
18.	Teachers have same expectations from students with disabilities as they have from other students.				
19.	Teachers include students with disabilities in all activities of classwork.				
18.	A disabled student face discrimination in learning process.				
19.	Students with disabilities face bullying, violence, and abuse from teachers.				
20.	Classmates have discriminatory attitudes with students with disabilities.				
21.	Students with disabilities face bullying, violence, and abuse from their classmates.				
	Educational Obstacles				
24.	The College offers a special quota or seat at time of admission for a student with disability.				
25.	The College provides fee concession to students with disabilities.				

4

26.	The College provides special scholarships to students with disabilities.					
27.	Curriculum of the College is modified to the needs of students with disabilities.					
28.	Students with disabilities are provided assistive devices from education department or the college which help them in mobility or learning.					
29.	Teachers plan their lessons according to special needs of students with disabilities.					
30.	Teachers have skills to understand basic requirements of students with disabilities.					
31.	Teachers are familiar with different ways of communication to students with disabilities.					
32.	Students with disabilities face difficulties in note taking during the lecture.					
33.	Students with disabilities face difficulties to participate in class discussions.					
34.	Students with disabilities are given preferences to participate extra-curricular activities.					
35.	The College administration provides writers to students with disabilities during internal or College exams.					
36.	The College administration assists to arrange writers for students with disabilities during board or university exams.					
37.	Extra time is granted to students with disabilities during College or internal exams.					
38.	Extra time is granted to students with disabilities during board or university exams.					
39.	The College examination centre is accessible for students with disabilities.					
40.	The board or university examination centres are accessible for students with disabilities.					

Appendix D   Email Text for Interview Permission

Request for research participants:

Dear friends, I am doing my Master of Education (Leadership & Management) from Flinders University, Adelaide. I am undertaking the study as a part of the Research Component of the Master Degree of Education programme. The project entitled, "Obstacles faced by Students with Disabilities (SWDs) in Colleges due to lack of an inclusive education framework in Pakistan" will investigate the experiences of undergraduate students with physical disabilities in Colleges in Pakistan. To explore the structural, attitudinal, and educational barriers/support mechanisms for inclusive education in Pakistan, I want to investigate the perceptions of SWPDs through in-depth interviews. If you are willing to take part in the research, then you will be requested to take part in an interview. The interview will be done online through Zoom, WhatsApp, Messengers, or Teams and will last around 60 minutes. The transcript of the interview will be provided to you to read, add, or delete some sections before you return it to me for use in the research. The information sheet about the research, and the consent form are attached with the Email.

This research project has been approved by the Flinders University's Human Research Ethics Committee (Project ID 4090). For queries regarding the ethics approval of this project, or to discuss any concerns or complaints, please contact the Executive Officer of the committee via telephone on +61 8 8201 3116 or email
human.researchethics@flinders.edu.au

Appendix E   Information Sheet and Consent Form for Interviewees

PARTICIPANT INFORMATION SHEET AND CONSENT FORM

EDUC9724A- Dissertation in Education (Part 1)

EDUC9724B- Dissertation in Education (Part 2)

EDUC9724C- Dissertation in Education (Part 3)

EDUC9724D- Dissertation in Education (Part 4)

Title: 'Obstacles faced by Students with Disabilities (SwD's) in Colleges due to lack of an inclusive education framework in Pakistan'

Chief Investigator
Ms Saira Ayub

College of Education, Psychology and Social Work
Flinders University
Tel: 0449 514 412

Supervisor
Dr Bev Rogers

College of Education, Psychology and Social Work

Flinders University
Tel: 08 82013445

My name is Saira Ayub and I am a Flinders University Masters student of Education (Leadership & Management). I am undertaking this research as part of my degree. For further information, you are more than welcome to contact my supervisor. Her details are listed above.

Description of the study

This project will investigate the experiences of undergraduate students with physical disabilities in Colleges in Pakistan, through a survey to identify the structural, attitudinal and educational challenges in mainstream Colleges in response to institutional policies and practices. The study will also explore the perceptions of representatives of Disabled Persons Organizations (DPO's), through in-depth interviews, to determine the system-wide difficulties for inclusive education in Pakistan. This project is supported by Flinders University, College of Education, Psychology and Social Work.

inspiring achievement

116

Purpose of the study

This project aims to find out the hurdles faced by physically disabled students in Colleges due to the lack of an inclusive learning policies and practices. The study also examines the perceptions of representatives of DPO's about the main obstacles at grass root levels to include SwD's in mainstream institutions. To this end, the study explores the major initiatives of the Government of Pakistan and a possible implementation path for Inclusive education in mainstream institutions in Pakistan.

Benefits of the study

The sharing of your experiences will help to understand the structural, attitudinal, educational, and system-wide obstacles due to lack of an inclusive learning framework in Pakistan.

Participant involvement and potential risks
If you agree to participate in the research study, you will be asked to:

- attend a one-on-one interview with a researcher that will be audio recorded. This can be via some platforms of choice (e.g. Zoom, WhatsApp, Messengers, Teams).
- respond to questions regarding your views about system-wide obstacles for inclusive education in Pakistan.

The interview will take about 60 minutes and participation is entirely voluntary. The transcript of the interview will be provided to you to read, add to or delete some sections before you return it to me for use in the research.

The following risks may apply to your participation in the project:

Risk of inconvenience: this involves allocating your time to participate in the research. The length of the interview will be no longer than 60 minutes and the time and date of the interview will be made at a time that is convenient to you such as after hours. You are required to request approval to participate in the study even if the interview takes place outside of contracted work hours.

Risk of discomfort: Regular breaks during the interview sessions would be provided. Before commencing the interviews, you will be informed, and you can stop the interview without having to explain the reason.

Risk of loss of data or information: data and information you provide will be stored securely on a secure, password-protected laptop and will not be accessible to non-users.

Risk of invasion of privacy: you will remain anonymous and will not be identified in the research. A broad, general description of your work location with will be provided with non-identifiable details.

The researchers do not expect the questions to cause any harm or discomfort to you. However, if you experience feelings of distress as a result of participation in this study, please let the research team know immediately.

Withdrawal Rights
You may, without any penalty, decline to take part in this research study. If you decide to take part and later change your mind, you may, without any penalty, withdraw at any time without providing an explanation. To withdraw, please contact the Chief Investigator or you may just refuse to answer any question and leave the interview at any time. Any data collected up to the point of your withdrawal will be securely destroyed.

Data recorded during interview may not be able to be destroyed. However, the data will not be used in this research study without your explicit consent.

Confidentiality and Privacy
Only researchers listed on this form have access to the individual information provided by you. Privacy and confidentiality will be assured at all times. The research outcomes may be presented at conferences, written up for publication or used for other research purposes as described in this information form. However, the privacy and confidentiality of individuals will be protected at all times. You will not be named, and your individual information will not be identifiable in any research products without your explicit consent.

No data, including identifiable, non-identifiable and de-identified datasets, will be shared or used in future research projects without your explicit consent.

Data Storage
The information collected may be stored securely on a password protected laptop and/or Flinders University server throughout the study. Any identifiable data will be de-identified for data storage purposes unless indicated otherwise. All data will be securely transferred to and stored at Flinders University for at least 12- months after the completion of the project. Following the required data storage period, all data will be securely destroyed according to university protocols.

How will I receive feedback?
On project completion, a short summary of the outcomes will be provided to all participants via email or published on Flinders University's website.

Ethics Committee Approval
The project has been approved by Flinders University's Human Research Ethics Committee (Project ID 4090).

Queries and Concerns
Queries or concerns regarding the research can be directed to the research team. If you have any complaints or reservations about the ethical conduct of this study, you may contact the Flinders University's Research Ethics & Compliance Office team via telephone 08 8201 3116 or email human.researchethics@flinders.edu.au.

Thank you for taking the time to read this information sheet which is yours to keep. If you accept our invitation to be involved, please sign the enclosed Consent Form.

CONSENT FORM

Consent Statement

☐ I have read and understood the information about the research, and I understand I am being asked to provide informed consent to participate in this research study. I understand that I can contact the research team if I have further questions about this research study.

☐ I am not aware of any condition that would prevent my participation, and I agree to participate in this project.

☐ I understand that I am free to withdraw at any time during the study.

☐ I understand that I can contact Flinders University's Research Ethics & Compliance Office if I have any complaints or reservations about the ethical conduct of this study.

☐ I understand that my involvement is confidential, and that the information collected may be published. I understand that I will not be identified in any research products.

I further consent to:

☐ participating in an interview

☐ having my information audio recorded

☐ my data and information being used in this project and other related projects for an extended period of time (no more than 12-months after the completion of the project).

Signed:

Name:

Date:

Appendix F   Online Interview Questions

Research Title: Obstacles faced by Students with Disabilities (SWDs) in Colleges due to lack of an inclusive education framework in Pakistan

To deeply understand the obstacles of inclusion in General Colleges, the following open-ended questions will be asked from SWPDs who also representative of Disabled Person's Organizations (DPOs).

Demographic Profile

1. Please introduce me a little about yourself and your College?

2. Please tell me about your DPO briefly.

Open-ended Questions

1. How do you understand with the concept of inclusive education? What are its basic elements?
2. As a student with disability, what are the main structural obstacles/support mechanism faced by you in a mainstream College?
3. Would you like to share some attitudes of administration, teachers, and peers with you as SWPDs?
4. As a student with disability, what are the main educational obstacles/support mechanism faced by you as a SWPDs in a mainstream College?

1

Appendix G   Overview of the Quantitative Themes

Demographic Profile of Respondents			
College Type	Education Level	Nature of Disability	Physical Disability Type

Obstacles faced by Student with Physical Disabilities at College Level		
Structural Obstacles	**Attitudinal Obstacles**	**Educational Obstacles**
College Premises	Administration's Perceptions of Disability	College Policy for SWPDs
Access to Basic Amenities	Attitudes of Teachers and Peers	Access to Classroom Activities
Classrooms Accessibility		Access to Examination
Transport Accessibility		

Appendix H   Example of a Crafted Story

Difficulties of Participant 1 to Access the PW College

P1 studied in a neighbouring school, and she used a wheelchair for back and forth to home. Her mother always supported in her mobility. After matriculation, she was admitted into a public College, yet it was located far away from her home. Without any alternative means of transportation, she could not reach to the College. This also proved challenging for her parents. The inaccessible public transport and the College bus made it difficult for her to access the College independently because she faced gender-related issues due to her impairment.

Her father was working in a public bank and picking and dropping P1 from home to College on a regular basis became impossible for him. Therefore, he decided to hire a private van, and even though it was more expensive, in the long run it provided his daughter with the accessible opportunity to expand on her education. P1's father shifted her on the front seat of the van and the folded wheelchair was kept at the back seats of the van. In the College, P1's friends shifted her from the van to the wheelchair. If her friends were not available, then the driver of the van helped in shifting. However, this experience was uncomfortable. She knew many girls with disabilities, who left their education due to unfriendly vehicle access processes and limited financial resources.

Description

In the story, P1 reflects her struggle for education despite of dependent mobility. As a female disabled student, she faces "multiple transport-accessibility challenges". P1 was unable to use the College bus for transport due to it being inaccessible for people in wheelchairs. P1's father hired a private van to transport his daughter helping her into the van. At the College, her friends helped her out of the van into her wheelchair, as it was located on the back seat. If her friends were not available then she had to rely on the van driver for shifting, which always being an unpleasant experience for her. From a religious and cultural perspective, the unpleasantness factors in several elements; such as personal embarrassment and or shame and a cultural taboo. These factors are typically reflected from the driver's point of view also, certainly if they are male. Culturally speaking, only direct male family members are allowed to assist in times of need, and not someone outside of the family dynamics. Both parties would feel uncomfortable in these types of situations. These additional limitations and challenges that are faced by disabled women, play a significant role within the accessibility restrictions, primarily due to the cultural and religious ideology.

1

Interpretation

P1 was excited to be admitted to the College, yet the transport was more complicated than education itself, primarily as the location was further away, and the College bus was not accessible to people in wheelchairs. Her father took the initiative to hire a private van. At home P1's father helped her for shifting in the van. At the College, her friends shifted her out from the van in her wheelchair. If her friends were absent, then the van driver helped her to shift from wheelchair to the van. These experiences made her feel uncomfortable, but she persisted, despite every day being hard just to get to the College, even without the study she was doing.

Transport is considered an essential criterion for easy and effective access to facilities and opportunities. In developing countries, independent mobility of persons with disabilities is a significant barrier due to non-availability of disabled-friendly vehicles and inaccessible local transport. However, in Pakistan women with disabilities face "multiple transport-accessibility challenges", through disability, gender, and economic status of family. If they belong to low-income group and their family cannot arrange a private vehicle for them, their opportunities for education and jobs automatically become minimised. Typically, parents do not have enough time for picking up and dropping off their disabled daughters to educational institutions or workplaces. This then results in them being confined to their homes. It is also the case that if women with disabilities feel a sense of shyness or embarrassment, then they cannot develop trust with outsiders, such as on an independent driver and therefore would prefer to stay home.

2

Appendix I   Overview of the Qualitative Themes

Participant	Crafted Story	Themes
Participant 1	Inaccessible upstairs classes change direction of studies	Access with-in College Premises
Participant 2	Adjustment of classroom located on upstairs	Access with-in College Premises
Participant 1	No or little access to bathroom facilities causes health issues	Access with-in College Premises
Participant 2	Accessible bathroom facilities for SWDs	Access with-in College Premises
Participant 1	Multiple transport-accessibility challenges	Accessibility in Transportation
Participant 2	Little access to College bus for SWPDs and travelling in OLMT	Accessibility in Transportation
Participant 1	Self-management and tackling with high risk of unsatisfactory sanitation because of no access to bathroom facilities	Lack of Awareness about the needs of SWPDs
Participant 2	Need of personal assistant to access the bathroom facility	Lack of Awareness about the needs of SWPDs
Participant 1	Gender based experience of shifting and travelling in a private vehicle	Resilience facing different attitudes
Participant 2	Facing odd public attitudes towards disability when travelling in OLMT	Resilience facing different attitudes
Participant 1	Ignorance of the examination staff about disability adjustment	Resilience facing different attitudes
Participant 2	Contribution of the CSS for creating disability awareness among College administrators, teachers and peers	Support Mechanisms to SWDs
Participant 1 and 2	Inaccessible examination centre	Hindrance in Taking Public Exams
Participant 1 and 2	Hindrance to organize a scribe	Hindrance in Taking Public Exams
Participant 1	Parents' physical and financial support to access education	Family Support
Participant 2	Father's assistance in taking public exams	Family Support
Participant 2	Brother's support to pick up and drop off to the College	Family Support