INCLUSIVITY OF NEURODIVERSE YOUNGSTERS IN HIGHER EDUCATION AND EMPLOYMENT: DATA-DRIVEN POLICY SOLUTION

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ABSTRACT

The National Policy for Persons with Disabilities in Pakistan (2002) emphasizes the inclusion of individuals with physical disabilities in education, training, and employment. However, the policy neglects mental health disabilities and neurodivergent individuals, such as those with autism and ADHD, despite international recognition of neurodiverse conditions as developmental disabilities specifically at higher education level. Therefore, this study employed a mixed-method approach to explore the challenges faced by neurodivergent individuals in Pakistan. Qualitative interviews were conducted from three different level firstly, with young adults diagnosed with ADHD and autism, secondly, from mother of autistic child who is also trained practitioner and lastly from a government official at government autism centre at Islamabad. While quantitative data was gathered through Knowledge, Attitudes, and Practices (KAP) questionnaires filled out by university faculty at Islamabad and Rawalpindi and employees in various organizations. Qualitative analysis revealed themes of discrimination, institutional barriers, social academics needs, and awareness and understanding of neurodiversity in higher education and employment, which critically shape lived experiences of neurodivergent individuals. It also revealed about the inadequacies in diagnostic practices and health care support and lack of understanding about policies and inclusive practices at university and employment sector level. Case study on mother of autistic child and practitioner reveals that there is lack of proper policies and implementation of policies to facilitate people diagnosed with neurodevelopmental disorders and their families in Pakistan except in one city i.e., Karachi. A detailed interview from Government official revealed that government specifically in Islamabad, the department of special education is issuing certificate to people with autism that can be used to avail benefits such as reduced travel costs and fee waivers in educational institutions. She also mentioned that she and her colleagues have developed a curriculum for children and adolescents, also their trainings are also focused on school teachers only not t university level. She has also mentioned that after 18th amendment each province will have to develop their own policies so she doesn't have much information about certificates and accommodations are offered in other provinces or not. Quantitative data for university teacher and employees from different sectors show low levels of knowledge on autism and ADHD which has significant positive relationship with two dimensions of practise scale including (i) Institutional Accommodation and Support Structure and (ii) Instructional Inclusion and Teachers Preparedness. Triangulation of these data sources provided a comprehensive understanding of the barriers faced by neurodivergent individuals and informed actionable recommendations for policy revision. The findings underscore the critical need for inclusive higher education opportunities and equitable employment policies to ensure the integration of neurodivergent individuals into mainstream society. In nutshell, this is a comprehensive study provide information from different sources and all the stakeholders who are involved in policy development and policy implementation. The triangulations of all data show that teachers and employees are important stake holders because these are people who implement polices therefore, their trainings are important. Besides, dissemination of information of existing policies to everyone is important so that people get benefit from the policies and improve standard of living in Pakistan.

PREFACE

The present project, "Inclusivity of Neurodiverse Youngsters in Higher Education and Employment: Data-Driven Policy Solution," got support from Research for Social Transformation and Advancement (RASTA), a flagship initiative of the Pakistan Institute of Development Economics (PIDE). The project was developed to understand and recognize the need for inclusion and equitable opportunities for neurodiverse individuals which is important and essential for creating a socially just, innovative, and sustainable society.

In recent years, awareness of neurodiversity has grown. The idea frames conditions such ASD, ADHD, and Dyslexia as natural variations in the brain functioning rather than deficits. Despite this evolving understanding, neurodiverse youth in Pakistan continue to face systemic barriers in accessing higher education and entering the workforce. Limited institutional awareness, insufficient policy frameworks, and prevailing stigma contribute to their marginalization and underutilization of their unique potential.

This research project aims to explore the challenges, perceptions, and mechanisms that influence the inclusion of neurodiverse individuals within academic and employment contexts. It further seeks to identify institutional practices, support systems, and policy interventions that can facilitate their meaningful participation in educational and professional environments. Through a combination of empirical investigation, stakeholder engagement, and evidence-based recommendations, this study seeks to inform policy reforms and institutional strategies that align with Pakistan's commitments to social equity, human capital development, and inclusive growth.

The project reflects the broader vision of RASTA–PIDE to promote knowledge-driven solutions for social transformation and sustainable development. It is hoped that the findings of this study will not only contribute to national dialogue on neurodiversity and inclusion but also encourage higher education institutions and employers to embrace neurodiverse talent as an asset to innovation and organizational culture.

This project, "*"Inclusivity of Neurodiverse Youngsters in Higher Education and Employment: Data-Driven Policy Solution,"* was made possible through the generous funding and institutional support of RASTA and PIDE. We extend our sincere gratitude to the RASTA Secretariat for their continued guidance, facilitation, and commitment to promoting socially transformative research in Pakistan.

We express our deepest appreciation to our mentors, Dr. Zahid Asghar, Dr. Nooreen Mujahid, and Dr. Safdar Sohail, whose invaluable insights, scholarly guidance, and encouragement have shaped the direction and depth of this study. Their expertise and thoughtful feedback have been instrumental in refining our research design, analytical framework, and policy implications.

Special thanks are due to our project team for their dedication and teamwork throughout the research process. We are especially grateful to the Co-Principal Investigator, Dr. Sahar Nadeem, and to our Research Associates, Ms. Sara Aleem Haqqi and Ms. Ayesha Ambreen, for their diligent efforts in literature review, data collection, and analysis. We also acknowledge the contributions of our Senior Research Assistant, Ms. Ayesha Jaffer, and Research Assistant, Mr. Ahmar Suliman, for their support in field coordination, data management, and report preparation.

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ABBREVIATIONS

ASD	Autism Spectrum Disorder
ADHD	Attention Deficit Hyper Active Disorder
KAP	Knowledge Attitude and Practice
NDAQ	Neurodiversity Attitudes Questionnaire
AKQ	Autism Knowledge Questionnaire
NIPS	Neurodiversity Inclusion in Practice Scale

INTRODUCTION

1.1. Background and context of the study

In recent years, more and more attention is being given worldwide to inclusion of neurodivergent people, such as people with autism spectrum disorder (ASD) and people with attention deficit hyperactivity disorder (ADHD). This growing attention is present in higher education and the workforce as well. This attention is underscored by global prevalence estimates, with approximately 366.33 million adults affected by symptomatic ADHD in 2021 (Song et al., 2021) and 61.8 million individuals reported as having ASD (Santomauro et al., 2025).

In this context, neurodivergent people face many different systemic barriers in pursuing their higher education and in entering the workforce. These include poor institutional support as well as inflexible learning environments and lack of accommodations for differences in learning and work styles (Scott et al., 2019; Butcher & Lane, 2025). Such structural problems heighten risks of stress, disengagement and dropout, even though modest adjustments can significantly improve accessibility (Liebel & Sigurðardóttir, 2023) and therefore decrease the effects. Beyond education, many neurodivergent adults face restriction in the employment opportunities due to workplace inaccessibility and insufficient supports and addressing these barriers is therefore critical to promoting equity and enabling neurodivergent students and graduates to contribute meaningfully to society (Scott et al., 2019; Mezzanotte, 2020; Nwachukwu et al., 2024). In recognition of this, there are many countries which have done good work. For example, Australia [National Autism Strategy 2025-2026 (Australian Government, 2025)], the United Kingdom [Autism Act 2009, (UK Government, 2009)), and India [National Education Policy 2020 (GOI, 2020)], that have introduced inclusive policies which focus on emphasizing equitable access, reasonable accommodations for neurodiverse people, and meaningful opportunities for these people for the participation in education and employment.

In Pakistan however the existing governmental policy framework continues to define disability largely in terms of physical impairments and disabilities, with little to no explicit recognition of neurodiversity (GOP, 2002). Currently educational opportunities for neurodivergent children in Pakistan are mostly restricted to the special education schools at the primary and intermediate levels, with very limited options for higher education. Employment opportunities are similarly limited, with government job quotas designated only for individuals with the physical disabilities (Hussain et al., 2022). Even these opportunities are often underutilized due to the barriers in access (Hussain et al., 2022). Evidence is present which suggests a growing number of neurodivergent children are being identified across the country. Jafri et al. (2023), for instance have reported substantial increases in referrals for autism (33%), ADHD (15.5%) and developmental delays (24.5%) over the past ten years. Despite this there is a lack of empirical research in Pakistan which focuses on exploring lived experiences, the educational trajectories and employment prospects of the neurodiverse youth.

It is imperative that we investigate neurodiverse individuals in higher education and examine the labor market in light of structural, institutional and social factors. It is essential to comprehend the lived experiences of neurodivergent adolescents as well as the views of universities and employers about the challenges and opportunities associated with inclusion in order to devise strategies that

are not only well-informed but also contextually relevant and effective in dealing with the systemic barriers.

1.2. Research Questions

In what ways do neuro-divergent youngsters' (Autism & ADHD) experience about inclusion within higher education and employment, and how do the knowledge, attitudes, and practices of university staff and organizational employees influence the challenges and opportunities that shape their educational and professional trajectories?

1. What are the opinions and experiences of neuro-divergent young adults regarding their inclusion in higher education and employment settings in Pakistan?

2. What opportunities and challenges do neuro-divergent young adults perceive in obtaining education and employment?

3. What knowledge, attitudes and practices (KAP) do teachers have about neuro-divergent young adults and their inclusivity in higher education?

4. What knowledge, attitudes and practices (KAP) do (employees) in different organizations have about neuro-divergent young adults' inclusion in workplace?

1.3. Research Objectives

1. To explore the experiences of neuro-divergent young adults regarding their inclusion in higher education and employment settings in Pakistan

2. To conduct KAP surveys at different public and private institutions to understand the perceptions of teachers and administrative staff about the inclusion of neuro-divergent young adults.

3. To conduct KAP surveys at different organizations to understand perceptions of professional adults (employees) about the inclusion of neuro-divergent young adults in the workplace.

4. To conduct data integration of the qualitative interviews and KAP surveys through triangulation.

5. To prepare and publish a policy brief informed by the data

1.4. Relevance to Public Policy

Pakistan's national policy on inclusive education was formulated in 2002. However, with significant shifts in societal behaviour, educational demands, and employment landscapes, this policy has become outdated. A major shortcoming is its lack of reference to neurodiversity, an important gap, especially given the rising number of reported cases of neurodevelopmental conditions in the country. There is a pressing need to revise this policy to reflect current realities and promote diversity and inclusion more effectively. In addition to this, Islamabad Capital Authority Act 2020 on Disability and Human Rights published by Ministry of Human Rights in Pakistan stated that "disability" means a long term physical or mental condition that limits a person's movements. senses or activities and shall include physical, mental, intellectual and developmental disorder or sensory impairments which in interaction with participate fully and effectively," in day to day performance

and interaction with others on an equal basis; discrimination on the basis of disability means any distinction, exclusion or restriction on the basis of disability which has the purpose or effect of impairing, nullifying the recognition, enjoyment or exercise on an equal basis with other, of all human rights and fundamental freedoms in the political, economic, social, denial of reasonable accommodation." This act does mention developmental and mental disability but did not specify any information about autism and disability. There is limited information available on the inclusion of neuro-divergent youth in higher education and their employability prospects in all policies in Pakistan. With a large proportion of Pakistan's population under the age of 35, it is critical to ensure that neuro-divergent young people are empowered to function independently and contribute meaningfully to society. This research aims to provide baseline data by exploring the experiences of neuro-divergent individuals, and by examining the knowledge, attitudes, and practices of teachers and staff at universities and professional adults in the workforce, in both public and private sectors. The findings will also help to identify the acceptance, and its barriers, in the employment of neuro-divergent young adults in professional settings.

LITERATURE REVIEW

Neurodiversity is the idea that states, variations in neurological functioning (such as autism spectrum disorder, attention deficit hyperactivity disorder, dyslexia among other related conditions) are naturally occurring that contribute to human diversity as opposed to incompetencies or pathologies (Dwyer,2022). This viewpoint is cemented in the social model of disability, which places hindrances to participation not in individual incompetencies but in hard or sometimes impossible to access social and institutional environments (den Houting, 2019). Research has shown that neurodiversity view tilts significance from re-education of the individual to adaptation of the environment, furthering systemic and environmental changes that allow individuals with various cognitive characteristics to flourish (den Houting, 2019).

Significantly, studies show that neurodivergent individuals frequently bring unique skills, such as creativity, meticulousness, and out of the box thinking when given support in the form of environments (Austin & Pisano, 2017; Hotte-Meunier et al., 2024). For reference, high scores on the Autism Spectrum Quotient have been coupled with advanced performance on tasks that ask for focused visual attention, such as embedded figures and complicated block design tasks (Grinter et al., 2009; Stewart et al., 2009). Similarly, individuals with attention deficit hyperactivity disorder often perform well in complex thinking tasks, showcasing advanced fluency, flexibility and originality (Stolte et al., 2022). Attention deficit hyperactivity disorder traits have also been positively related with cognitive abilities such as hyperfocus, mental flexibility and sensory processing sensitivity (Schippers et al., 2024), signaling the potential benefits of neurodivergent cognitive styles.

Together, these studies point to the suggestion that neurodivergent traits can signal cognitive benefits in contexts that evoke precise visual and spatial assessments as well as in situations where creative problem solving is required. Such abilities may be particularly advantageous in higher education programs like STEM, research and the visual arts, and in employment sectors such as tech, engineering, data science, and quality control. Essentially, fields where precision, pattern, recognition and sustained concentration are important. Prudent to note, however, societal barriers such as biased systems in place, negative social attitudes and rigid institutional structures frequently stop these strong abilities from being fully recognized (Dwyer, 2022).

2.1. Neurodiversity in Higher Education

Global prevalence estimates signal that around 1 in 127 individuals suffer from autism (Song et al., 2021). In higher education, estimates from high income countries point to the fact that precisely 0.7% to 2% of U.S university students are autistic (White et al., 2011), where in the UK around 1% to 2% of students suffer from autism. Important to mention that under-diagnosis and keeping it hidden due to societal stigmas attached likely mean that autism is possibly more prevalent (NAS, 2016). In comparison, no empirical study has yet given substantial evidence in support of the prevalence of clinically diagnosed autism among university students in Pakistan, referring to the existing work which is largely limited to sub-threshold autistic trait studies and awareness surveys (Maryam & Khawar, 2022). This gap signifies the need for research on inclusion and service provision in the local context. Similarly, attention deficit hyperactivity disorder is a highly founded neurodevelopmental condition in higher education. Based off of approximations, globally 2.6% of adults meet the standard

criteria for persistent attention deficit hyperactivity disorder, while on the other hand 6% to 7% are predisposed to experiencing symptomatic attention deficit hyperactivity disorder (Song et al., 2021). In universities, prevalence rates are significantly higher than in the general population. In the US, it is estimated that 2% to 8% of the students meet diagnostic conditions (DuPaul et al., 2009). In Pakistan, recent studies have shown stunningly higher prevalence rates with over 30% of medical undergraduate students coming out positive for attention deficit hyperactivity disorder (Sabir et al., 2024; Bilal et al., 2025). These alarming findings signal to the heightened burden of undiagnosed attention deficit hyperactivity disorder, and possibly autism amongst students. Also provide evidence to the absence of systemic diagnostic and support structures in higher education institutions.

Demonstrated through research on higher education, progress and challenges persist in fostering inclusivity. In the Global North, universities have keenly adopted disability support services, Universal Designs for Learning frameworks, and targeted mentoring for neurodivergent students (Clouder et al., 2020; Van Hees et al., 2015). For context, studies done in the UK and USA provide significant support to the fact that institutional awareness and training programs for faculty can significantly improve how student outputs (Gibson & Kendall, 2010; Gelbar et al., 2015). However, there is a fair amount of evidence which suggests that neurodivergent students often underutilize support that is available owing to the fear of being marginalized or concerns about people knowing (Anderson et al., 2017).

Even though prevalence estimates in Pakistan may be unclear, studies have been carried out on the hindrances and struggles faced by students with disabilities, generally, in higher education. Research again and again significantly puts forth the fact that universities lack structural and social readiness necessary for inclusivity. In an additional instance, Naz et al. (2024a) found that while faculty members at the University of Karachi admitted and acknowledged the importance of providing support to students with disabilities, gaps in training, awareness and lack of resources limited their ability to place effective accommodative measures in place. Similarly, students with disabilities themselves specified inaccessible infrastructure, insufficient instructional support and social exclusion as great barriers to normal participation in academic life (Naz et al., 2024b). At a greater level institutional responses to accommodations required for disabilities are inconsistent, in many cases faculty resorting to operate without clear guidelines or support functionalities in place, (Bokhari et al., 2025). Studies done on regional levels such as as Mohsin & Aamir (2023) in Bahawalpur, have also pointed to the sheer absence of supporting technologies, insufficient policy and rigid stigma as magnificent hinderances. These findings show that in addition to the lack of prevalence data, Pakistani higher education institutions face institutionalized barriers in bringing forth inclusive environments and culture. These limitations work in enabling marginalization of neurodivergent students, whose specific challenges remain untouched in both research and practice.

2.2. Neurodiversity in Employment

Autistic adults represent the group with the lowest employment rates among all disabled people, globally. The employment rates are 80% for the general population and 53% for the disabled adults, in the UK, whereas only 29% of autistic adults have any kind of employment (ONS, 2021). However,

there are studies that reveal that ADHD adults suffer from the overall worst occupational outcomes which leads to problems like more unemployment, less job stability, and more at-work difficulties (Biederman & Faraone, 2006). Such discrepancies in employment outcomes are indicative of the presence of persistent barriers that still exist for neurodivergent individuals in transitioning from education to the labor market successfully.

Research conducted in countries with high-income economies points out not only the employer-level but also the overall systemic barriers. A considerable number of companies still do not grasp the concept of neurodiversity well and they usually regard neurodivergent individuals negatively which, in turn, leads to discrimination in hiring and further on, hinders career development. The issue of telling employers about one's support needs is another barrier that is quite difficult to overcome. Many times, autistic and individuals with ADHD refrain from making requests for accommodations because they fear being stigmatized or this having a negative impact on their career (Lindsay et al., 2019). At the same time, the U.S. and the U.K. have had the most successful targeted employment programs. Neurodiversity-focused recruitment initiatives have been linked with higher retention and greater job satisfaction, mainly because of structured supports such as coaching, mentoring, and training at the workplace (Austin & Pisano, 2017). In conclusion, the data indicates that if organizations practice neurodiversity-inclusive methods, the employment results would be tremendously better. Besides, the case studies of the world-famous businesses such as SAP and Microsoft show that inclusive hiring, employee-friendly onboarding, and personalized support help retain and satisfy more workers.

In low and middle-income countries, including Pakistan, there is very limited research on neurodivergence and employment. Research inclusive of disability suggests that the actual causes of labor market exclusion in these countries are widespread stigma, inaccessible workplaces, and weak policy implementation (Mitra et al., 2013). Even today, there is no empirical study that focusses on the employment experiences of autistic or ADHD adults in Pakistan. This omission is fundamental because neurodiverse individuals will continue to be invisible in labour market policies and practices, in the absence of data related to prevalence, occupational participation, and workplace barriers.

2.3. The roles of Knowledge, Application and Practice in Inclusivity

Knowledge is a key lever in the translation of policy commitments into inclusive practices in both higher education and employment. Where teachers and employers have an understanding of neurodiversity, they are better placed to identify those aspects of challenge that relate to disability rather than personal failing, thus reducing stigma and allowing proactive support to be provided. In higher education, studies illustrate that training of staff leads to significant improvement in inclusive practices. For example, Clouder et al. (2020) discovered that academics who had received neurodiversity training expressed more confidence in making adjustments to teaching, including offering flexible assessments, along with a range of teaching strategies compatible with Universal Design for Learning. The prediction of the use of adjustments like flexible deadlines, sensory adjustments, and assistive devices was directly linked to the awareness of what support strategies were available. In the same way, Van Hees et al., (2015) showed that teachers who were informed

beforehand would cooperate better with disability services and would be bindingly able to make changes that led to higher retention rates. Beyond influencing skills, awareness also shapes climate: where educators have knowledge, neurodivergent students are more likely to disclose needs, thus facilitating access to supports (Anderson et al., 2017).

Similar results were obtained in the context of employment. According to Lindsay et al. (2019), workshops for employers that debunked myths regarding the costs of accommodations not only reduced stigma but also increased the likelihood of hiring autistic applicants. On the other hand, lack of knowledge frequently led to either superficial or ineffective accommodations.

Evidence from South Asia supports similar dynamics. In a research conducted in Pakistan, it was found that the doctors were not aware of neurodevelopmental disorders at a very basic level and only 13.7% of the GPs and 21.6% of the pediatricians were knowledgeable enough to diagnose ADHD. (Rahbar et al., 2011). Although not aimed at higher education or employment explicitly, the results indicate significant knowledge gaps in the system that make the adoption of inclusive practices difficult. Knowledge about neurodiverse needs being embedded, practiced, and applied in everyday teaching and workplace contexts goes a long way in making institutions inclusive. Whereas Pakistan has witnessed a number of studies exploring general attitudes toward disability in education and employment, there is little to no empirical research into what university faculty or employers actually know and do regarding neurodivergence. Very few studies have assessed higher education faculty and employer knowledge regarding neurodivergence and much fewer are those studying how such knowledge translates into practice. This makes it difficult to ascertain whether existing awareness results in effective accommodations/inclusive practice and evidences the need for context-specific studies moving beyond attitudes to an investigation of how knowledge is operationalized in real institutional and workplace settings.

2.4. Policy and Inclusivity

The inclusion of neurodivergent people into education and employment has, within recent decades, become an increasingly prominent policy concern globally. High-income countries have led in the development of comprehensive frameworks that explicitly recognize neurodiversity. For instance, the Autism Act (2009, updated 2021–2026 strategy) and the Equality Act (2010) of the United Kingdom compel the provision of appropriate adjustments in both educational and workplace environments, at the same time framing the whole issue of inclusion as a legal necessity and not as an optional service that could be availed of by those who want it (UK Government, 2021). In the same way, the National Autism Strategy Australia (2025–2026) is making use of universal design principles and anti-discrimination laws (Australian Government, n.d.) to support the inclusion of autism-related issues in education, employment, and social welfare sectors. Based on the National Education Policy, 2020, India is granting the disabled including people with neurodevelopmental disabilities access to inclusive curricula, scholarships, and opportunities equivalent (Government of India, 2020).

Among these cases, the main characteristics pointed out were: stating clearly that neurodiversity needs institutional support; strong promises to provide reasonable adjustments; application of universal design and inclusive teaching methods; as well as taking up such initiatives as employer

incentives and anti-discrimination enforcement. Evidence of the presence of such frameworks, joined to monitoring and accountability, demonstrates their positive influence in improving outcomes in higher education and employment settings (Lindsay et al., 2019).

2.5. Pakistan's Policy Landscape

On the other hand, neurodiversity remains poorly addressed in Pakistan's policy framework. The National Policy for Persons with Disabilities (2002) remains the single federal document that defines disability primarily along medical and physical lines with very little recognition of neurodevelopmental conditions such as autism or ADHD (GOP, 2002). Despite the fact that the policy promotes an inclusive approach in the education and employment sectors, the majority of the state-run institutions still give importance to the segregated special education schools that only cater up to the intermediate level, thus creating a considerable divide in the opportunities available for the higher education of the neurodivergent students (Hussain et al., 2022).

A fresh policy was introduced to assist students with disabilities at the higher education institutions throughout the country by the Higher Education Commission of Pakistan in the year 2021. This framework, although a major milestone towards acknowledging accessibility, is still somewhat restricted because the accessibility policies have not yet been extended to cover the areas of job openings, access to other social aspects, and so on. The policy gives a clear definition, saying, "A disability is defined as a mental, intellectual, or sensory impairment that can be permanent, long-term, temporary, progressive, or fluctuating." Nevertheless, it does not touch upon the issue of neurodiversity or the cases of autism and ADHD in any manner whatsoever. It also allows provisions for students to request special arrangements and requires universities to develop accessibility in their infrastructure and teaching. Again, for policy implementation, appropriate training and preparedness are required by the faculty and administrative staff. Since no empirical study has been conducted so far on neurodiversity-related knowledge, attitude, and practices of Pakistani higher education staff, the effectiveness of the above-mentioned policy in bringing about genuine inclusion is not certain.

Employment policies also have similar shortcomings. Quotas for jobs by federal and provincial governments for persons with disability, usually in the range of 2–5%, are poorly implemented and rarely consider non-visible disabilities (Hussain et al., 2022). Policy development lags despite a recent increase in referrals for autism, ADHD, and developmental delays during the past couple of years (Jafri et al., 2023). According to scholars, national and provincial frameworks run the risk of reifying exclusion without explicit recognition of neurodiversity in their policies and practice, redressing physical impairments at the expense of systemic barriers faced by neurodivergent individuals.

When viewed together, these discoveries imply that the Pakistani policy and practice environment is not up to international standards yet. On the other hand, the UK, Australia, and India have all progressed in the direction of open acknowledgment of neurodiversity along with legally mandated inclusion methods (UK Government, 2021; Government of India, 2020; Australian Government, n.d). Pakistan's situation is that it still sticks to a system that focuses on impairment-based definitions of disability (GOP, 2002).

This translates into a systemic exclusion of neurodivergent youth from pathways to higher education and workforce participation. Importantly empirical evidence on the knowledge, attitudes and practices of employers and higher education actors in Pakistan is scant leaving a huge gap in understanding how institutional decisions shape inclusion. This omission is crucial if national policy is planned to be aligned with global best practices.

2.6. Theoretical Background

2.6.1. The Social Model of Disability

The model of the social disability explains the differences between disability and impairment, which is generated when institutions, environments and social structures are unable to understand and accommodate the differences (Oliver, 1990; Shakespeare, 2006). The model emphasized that it is not the individual who is problem instead barriers created at different context such as cultural and social level. Thus, disability in these situation cannot be unavoidable because it is produced and reinforced due to discriminatory attitude, inaccessible design and systemic exclusion.

This model explains disability with reference to environment and society. It explains that people with different disability live their lives in complex social structure which consists of barrier as well as opportunities created by systems and resources (Traci et al., 2025). It focuses on the barriers which hinder people with impairment to fully participate in the society. The social model suggests that an individual's participation in society and their quality of life are impacted at least as much by the environment as by the person's physical or mental characteristics. It posits that society generally marginalized people with disability and emphasize on the need of a social change in the form of changes in society attitude, policy amendments and improvement in the physical environment (Traci et al., 2025).

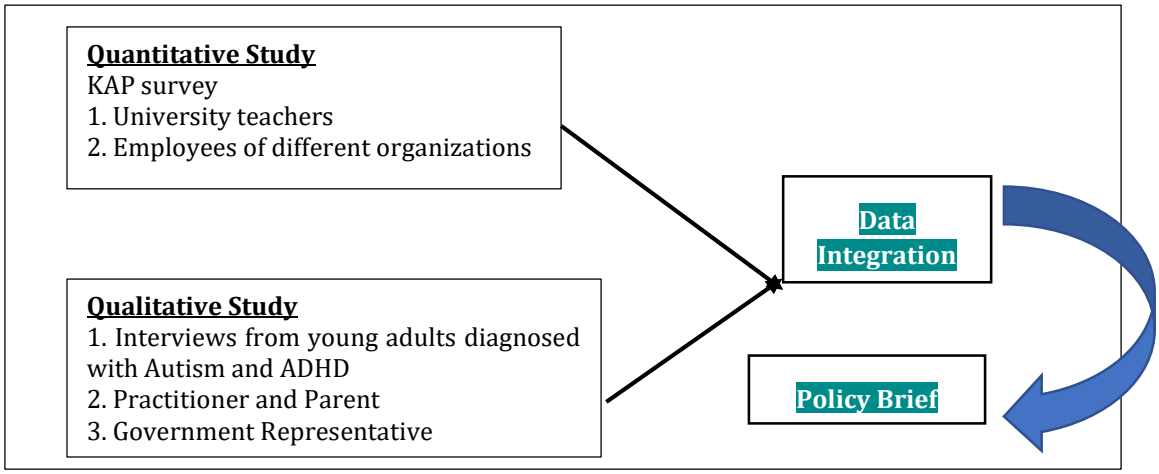
This perspective is especially critical for understanding inclusion of people diagnosed with autism and ADHD. While adults with autism and ADHD may experience challenges in attention, organization, or executive functioning, it is the rigidity of institutional structures that transforms these impairments into disabling barriers. Standardized assessment formats, lecture-heavy pedagogy, inflexible attendance rules, and reliance on self-disclosure all create conditions where autism and ADHD traits become obstacles to success (Riddell & Weedon, 2014; Woods, 2017a). To compound the imbalance, literature suggested that Predominant Neurotype society ignores the challenges autistic and ADHD individuals often experience, actively creating a social barrier to their employment (Graby, 2016). These factors contribute towards the systematic discrimination and oppression of autistic and ADHD individuals by Predominant Neurotype society (Woods, 2017b).

METHODOLOGY

3.1 Study design

This will be mixed method study where qualitative and quantitative data will be collected simultaneously. It will include qualitative interviews, and cross sectional surveys. According to Howlett & Mukherjee (2018), whenever, research is conducted to develop a policy on the research findings, it is imperative to take data from target audience and from those who will implement the policy, so that the sensitivity of the people or community can be identified. Therefore, in the current study the target audience is youngsters with Autism and ADHD and those who will implement and use the policy are teachers and employers will be selected for the data collection.

Figure 1: Research Plan



Source: Authors' computations.

3.2. Case studies

Interviews were conducted to understand perspective of parent having child diagnosed with autism and who is practicing different therapies to support people diagnosed neurodevelopmental disorders and from the government official who is working in the inclusive policy and establishment autism center.

3.3. Qualitative Phase

The methodology of this study employs Interpretative Phenomenological Analysis (IPA) to explore the lived experiences of neurodivergent individuals. The approach is uniquely suited to capturing the depth and complexity of personal narratives (Smith et al., 2009). IPA was selected because it prioritizes idiographic examination, allowing for a detailed understanding of how neurodivergent individuals interpret their social and professional environments and experience their reality. This method aligns with the study's goal of uncovering systemic barriers, personal struggles, and understanding the experiences of neurodivergent individuals while taking their unique experiences and individuals differences into account. Data collection involved semi-structured interviews with a purposive sample of neurodivergent adults, conducted in accessible formats to accommodate diverse communication preferences.

3.3.1. Participants and Sampling

A purposive sampling strategy was employed to recruit young adults (ages 18-35) with professionally diagnosed ADHD or Autism Spectrum Disorder residing in Islamabad, Karachi or Rawalpindi. Participants were recruited through Snowball technique and targeted advertisements on social media platforms (LinkedIn and Facebook). The current preliminary sample consists of 20 participants (10 male, 10 female), with equal gender distribution across diagnostic groups: 10 participants with ADHD (5 male, 5 female) and 10 autistic participants (5 male, 5 female). Initial coding shows that the data saturation has reached but a final decision will be made once inter-coder (primary coder, PI, and research assistant) is established, it will ensure thematic completeness (Guest et al., 2006). This approach is adopted to establish the study's qualitative integrity while remaining flexible about emergence of new themes during secondary coding.

3.3.2. Data Collection

Twenty semi-structured interviews were conducted on Zoom, each lasted 40 to 75 minutes. The interview guideline was developed by conflicting a thorough literature review, consultation with experts (clinical psychologist). Pilot testing was done with three Neurodivergent individuals. Participants were required to complete a detailed Google form questionnaire designed to collect demographic information such as age, gender, employment status, education level, mother's occupation, father's occupation, living arrangements, socioeconomic status, and family structure. The form also included questions related to diagnostic history such as age of diagnosis, diagnostic process, and reason for seeking diagnosis.

Enumerators conducted interviews over a period of two months. All of the enumerators were psychology graduates with experience of working with neuro-divergent individuals for at least three months. The protocol mandated that they completed a continuing education course on understanding autism and ADHD by University of Derby. They were also required to go through Oxford University's Neuroinclusive Communication Guide before conducting interviews. They used open ended prompts (" Can you share more about this?"), avoided interruptions and were sensitised to understand and respond appropriately to the non-verbal cues that are common in individuals with autism. All sessions were recorded with the consent of the participants and we're securely stored on encrypted data storage file accessible only to the team members. Enumerators also reflected on the challenges they faced during the interviews and shared their own thoughts about the interviews they had conducted.

3.3.3. Interview Guideline

The interview guideline had a semi structured four section format with a focus on understanding ADHD and ASD experiences in both educational and employment contexts. First section had questions related to participants overall educational journey, experiences in the higher education institutions, diagnostic journey, and academic challenges. The second section probed into workplace experiences, inclusion policies in the Pakistani workplaces, and job challenges. The third section contained questions related to Knowledge, Attitude, and Practices, and assessed perceptions of neurodivergent individuals about broader societal understanding of neurodiversity. The fourth and the last section tapped into personal definitions of neurodiversity and policy suggestions. There were

a total of 30 core questions, five prompts were employed for further proving. Prompts were identified through analysis of pilot interviews.

3.3.4. Ethical Considerations

The study received ethical approval from National University of Science and Technology's review board (ERC/NSHS/2025/003), ensuring strict ethical adherence. Ethical considerations have been central to the process, including ensuring participant autonomy, maintaining confidentiality, and practicing reflexivity to minimize researcher bias. Participants were informed of their right to withdraw and were offered debriefing. Confidentiality is maintained through anonymization of data and secure storage.

3.3.5. Data Analysis Plan

The analysis follows Smith et al.'s (2009) IPA framework, currently in the preliminary stages. Researchers are engaged in: (1) repeated reading of transcripts for immersion; (2) initial note-taking and descriptive coding; (3) identification of emergent themes within individual cases; and (4) cross-case analysis to identify patterns. Emerging themes currently being explored include workplace challenges, academic challenges, workplace accommodations etc. MAXQDA software version 24.2 is being used to assist with data organization and theme development.

3.3.6. Pilot Study

The pilot study was conducted to ensure the robustness and effectiveness of interview guidelines, probes and procedures of taking interview. Specifically, the purpose was to assess whether the interview guidelines were comprehensive enough to capture all the relevant information aligned with the study objectives and questions. By conducting pilot study on three participants, the research team was able to determine if the questions were clear, contextually appropriate, and capable of eliciting in-depth responses. Additionally, it was used to evaluate the standardization and consistency of the protocols followed by the enumerators. Feedback collected during pilot study helped team to refine interview guideline and ensure the data collection in the main study would be reliable, valid and standardized.

3.3.7. Qualitative Data Analysis and Findings

3.3.7.1. Validity and Reliability

Several strategies were adopted to enhance the study's trustworthiness. A member checking protocol was developed and two weeks after the conduction of all interviews, member checking was done. Each of the interviewer reached out to the interviewees and let them review themes and provide feedback. Reflections were recorded by each interviewer to track their own biased. Peer debriefing is yet to be done with other qualitative researchers, it will establish external validation. The audit trail documents all data and steps of research to ensure transparency.

3.3.7.2. Profile of Young Adults Diagnosed with Autism and ADHD

Table 1: Demographics of Young Adults with Autism and ADHD

#	Demographics	*F*	#	Demographics	*F*
1	**Gender**		**4**	**Diagnosed by**	

	Female (Autism)	5		Psychologist	2
	Male (Autism)	5		Psychiatrist	17
	Female (ADHD)	5		School Counsellor	1
	Male (ADHD)	5	**5**	**City**	
2	**Economic Status**			Rawalpindi	3
	Upper Middle	6		Karachi	4
	Middle	8		Lahore	2
	Lower Middle	6		Islamabad	11
3	**Diagnosed Age**		6	**University**	
	Childhood	4		Government	5
	Adolescence	2		Private	11
	Adulthood	14		Abroad	1 (Previously with draw from Pakistan University)
				Drop Out	1
				Not Mentioned	2

Source: Authors' computations.

Table 2: Employment Status of Participants and Medication

Interview	Medication If Taken	Employment Organization or Sector	Organization Name
01 (ADHD)	Methylphenidate	Student/Freelancing (Awaiting start)	Seeking employment
02 (ADHD)	Methylphenidate (on and off)	Freelancer in Digital Marketing	Prefer Not Say
03 (ADHD)	Takes Ritalin	Freelancing (Previously worked in an NGO)	Prefer Not Say
04 (ADHD)	Takes Ritalin	Freelancing (Previously worked in corporate sector in media/advertising)	Didn't mentioned
05 (Autism)	None	Unemployed (Previously a manager in the insurance sector)	Prefer Not Say
06 (Autism)	Takes medication (didn't mention name)	Online medical billing remote job	On a break
07 (ADHD)	Methylphenidate	Government Offer	Prefer not to Say
08 (Autism)	Takes Zoloft (Sertraline) for anxiety; previously took Ritalin	Unemployed (Previously an NGO Intern in Lahore and also creative writer)	Seeking Employment
09 (Autism)	None	Remote job in international nonprofit organization	Part time
10 (ADHD)	None	Multiple freelance roles current one involves building better connections with clients from different aspects/fields	Part time
11 (ADHD)	None	Private sector project coordinator	Full time
12 (ADHD)	None	Private organization, previously worked in medical sector	Seeking Employment
13 (Autism)	Multiple but not specified (not taking now)	Self-employed jeweler	Full time
14 (Autism)	None	Works at a design firm (architectural consultancy)	On a break
15 (Autism)	None	Corporate sector (marketing)	Full time
16 (ADHD)	None	US/Canada-based movement industry company (Remote)	Full time
17 (Autism)	None	Private sector	Full time

18 (ADHD)	Ritalin	Experience at organization working with neuro-diverse people	Seeking Employment
19 (Autism)	Ritalin	Not specified	On a break
20 (Autism)	Aripriprazole, Prozac, Respiradol	Not working anymore but worked at a private law firm	On a break

Source: Authors' computations.

Table 1 and 2 explain over all profile of the participants in qualitative study. Table 1 shows that there is equal number male and female diagnosed with autism and ADHD, almost equal number of young adults belong to upper, middle and low income background, most are diagnosed in adulthood and majority were diagnosed by psychiatrist. Table 2 explain participant's university and employment details and medication that help them to maintain their symptoms.

3.3.7.3. Interpretative Phenomenological Analysis

IPA is applied to understand and interpret personal accounts of the lived experiences of young adults diagnosed with autism and ADHD to understand the essence of their challenges and strengths. Most of them reported that they do not know about the level of their condition. Two of them reported that they had level one autism and one of them had some motor problems. Findings of the lived experiences in higher education system and workplaces are mentioned below.

The Lived Experience of Institutional Disablement: For the participants, the university is not merely a challenging environment, it is an active agent of disablement. The core of this experience is captured by the theme "Institutional and Systemic Barriers." Participants repeatedly described a system of profound "Inflexibility." One participant mentioned, "I cannot be going to each and every one of my instructor and explaining to them," speaks of a system that places the entire burden of accommodation on the student. Accommodations are not a right but a favour granted at the discretion of individual instructors, making support unsustainable and unpredictable. A lot of individuals didn't even disclose their diagnosis because they feared that instead of receiving support they will be treated differently. This inflexibility is combined with a near-total "Absence of Structural Inclusion." The data from multiple participants noted the absence of proper support services. The experience of being told "Everyone can do it, you can do it too" when seeking support indicated towards a system that is inflexible and simply not fit to accommodate a neurodivergent individual.

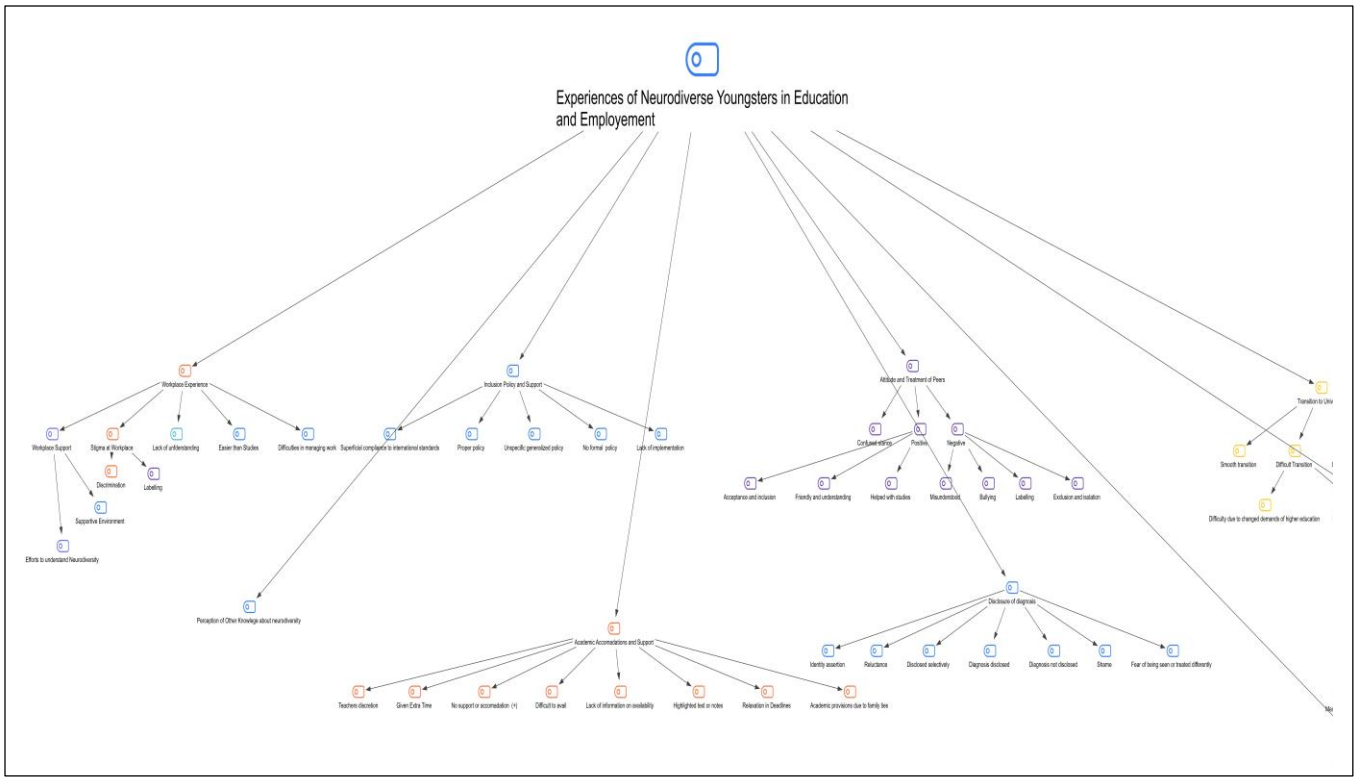
The Experience of Facing Stigma and Misunderstanding: Social lives of neurodivergent individuals are often marked by challenges and communication issues. These issues become even more exacerbated when the attitude of society towards them is disabling. The theme "Other's Attitude Towards Neurodiversity" revealed a broad range of harmful perceptions and ideas that are deeply rooted in our society. Participants reported being seen as a "diseased" or "shame upon their families". Some reported that they were expected to be geniuses because of their autism. The use of derogatory labels such as "crazy", "idiot", or "khota (donkey,)" assigned to neurodivergent individuals revealed how deep-seated stigma is. This stigma seemed to have influenced "Disclosure of Diagnosis". Majority of participants chose to conceal their diagnostic status fearing that they might get treated "differently" or would be dismissed as someone who is "making it up". Those who disclosed their diagnosis reported that it did not get them as much support as they had expected, in some instances though disclosing diagnosis at workplace or higher education institution did elicit

support from managers and teachers, but mostly that support was unstructured and granted as a favour and not a right. The interviews were also saturated with reports of masking, where individuals learned to try to act "normal", acting like neurotypical individuals in order to fit in and survive. However, masking seems to have affected with negative mental health consequences, as those who masked a lot reported feeling burnt out and depressed.

Pathways to Diagnosis and Empowerment Among Barriers: The "Diagnostic Journey" was a core component of the most of the narratives. For most of the participants it was a traumatic, draining, and invalidating process. Most of the narratives revealed a struggle with the system that lacks structure and doesn't follow global standards. The process of diagnosis is inconsistent and most of the participants were diagnosed by psychiatrists. None of the participants reported involvement of a multidisciplinary team in the process of diagnosis highlighting a big gap in the healthcare system. Invalidation was also one of the common elements in the narratives, where the neurodivergent individuals are told to 'overcome' their condition or told to simply not share their diagnosis. This when done by a healthcare professional can be very dangerous and might cause psychological injury. Despite all of these limiting factors the data has some positive implications. Alongside these barriers, we identified a theme, 'Room for Empowerment'. This occurs in workplaces with understanding managers who provide clear instructions and flexible breaks, and in academic settings where there are supportive peers and teachers who create inclusive classrooms. The highlight is that support exists where there is awareness and awareness is critical. One participant mentioned, *"My teacher understood me because his son had autism too"*.

Conclusion: Analysis using IPA and social disability model revealed that the true disability is created by a rigid system (higher education institutions and workplaces) and the wider society that is unaware, and often hostile towards individuals with autism. It is a system that refuses to see them, hear them, or adapt to their needs, thereby actively disabling them. The exhaustion they describe comes not from being autistic and ADHD, but from energy required to navigate systems that are not built for them.

Figure 2: Thematic Map for the Qualitative Study



Source: Authors' calculations.

3.4. Quantitative Phase

Surveys will be collected from teachers from higher education institutions, as well as from employees belonging to different organizations and sectors. Similarly, for higher education settings, data will be collected from government, private and semi-private institutions.

3.4.1. Sample and Sampling Procedure

Literature suggested that minimum of 350 participants from university and 150 employment have to be recruited for collecting data on Knowledge attitude and practice (KAP) questionnaire (Ali et al., 2024; Said el al., 2024; Schuck et al 2024). However, in this study 800 university teachers were approached but 393 teachers return forms. After data cleaning, data of 13 participants were deleted as number of missing values were more than 5%. Therefore, data analysis was done on 393. Overall the response rate for this sample was 49.1%. The employees sample was collected from service (telecom, software houses, banks) and education sector (school, college and universities) through purposive sampling. A total of 500 employees in different organizations were approached and at the end 280 forms were returned. The cleaning and data analysis is still in the process. After deleting data of 8 participants, total number participants' data on which analysis was run is 272 and the response rate would be 56%.

3.4.2. Measures

Following measures were used to collect data from University teachers and employees from different organizations.

1. Demographics Information Sheet: It was designed to capture background details of the participants, including age, gender, role (teacher or employer), years of professional experience, type of institution (public or private), and prior exposure to neurodivergent individuals (such as having attended training or having direct teaching/working experience with them). As these are factual, self-reported characteristics, issues of reliability and validity are not typically applicable. However, these variables were essential in exploring associations between participant characteristics and their knowledge, attitudes, and practices regarding neurodiversity.

2. Neurodiversity Attitudes Questionnaire (NDAQ): It was developed by Schuck et al. (2024) and was used to measure attitudes toward neurodivergent young adults. This instrument was specifically designed to assess perceptions of neurodiversity among teachers and professionals. The validation study reported that the questionnaire demonstrated a five-factor structure, including **diversity and inclusion,** fitting in, cross-neurotype interactions, medical model, and listening and reflecting. Reliability and validity of this scale is good.

3. Autism Knowledge Questionnaire (AKQ): It is developed by Haimour et al. (2013) to assess participants' knowledge about autism. This questionnaire was developed to assess the factual understanding of the ASD which covers symptoms, causes, prevalence and intervention strategies. Items are presented in a True/False format, allowing the creation of a composite knowledge score, with higher scores reflecting greater accuracy of knowledge. The AKQ has demonstrated acceptable reliability, with Cronbach's alpha values above 0.70 in previous studies, indicating internal consistency. Content validity was supported by expert reviews during its development, ensuring that the items appropriately covered the conceptual domains of autism knowledge.

4. ADHD (perceived knowledge): This questionnaire was developed by Kos et al. 2004. The questionnaire assessed teachers' perception of how much they thought they knew about ADHD (perceived knowledge) as well as how much they actually knew about the disorder (actual knowledge). Perceived knowledge was measured on a 10-cm visual analog scale, where participants were asked to place a cross on the part of the line that best represented how much they thought they knew about ADHD. The scale was anchored at "Very Little" (0 cm) and "A Lot" (10 cm). Actual knowledge was assessed by asking respondents to rate each of 27 statements about ADHD as either TRUE, FALSE, or DON'T KNOW. These responses were later coded as either 1 (correct), 2 (incorrect), or 3 (don't know).

5. Neurodiversity Inclusion in Practice Scale (NIPS): This scale was developed following the PROMIS Cooperative Group (2013), which include, generating pool of question from literature, UDL, neurodiversity, social model of disability and UNICEF's Disability Inclusion Policy and Strategy 2022–2030 (UNICEF, 2023), expert panel (one clinical psychologist, one researcher, one poly maker, one employer, one teacher) review the questions and rated them, items were selected, pilot testing was done on 30 University teachers and 30 employees. Items focused on two domains: Institutional Accommodation and Support Structure and Instructional Inclusion and Teachers Preparedness. A four-point frequency response scale (ranging from "Never" to "Very Much") was used to capture the extent of inclusive behaviors. The instrument's content validity was ensured through expert review and alignment with UNICEF's strategic framework. Face validity was further strengthened through

pilot testing with a small group of teachers and employers. Internal consistency (Cronbach's alpha), of this scale in both sample show good reliability (0.82-0.85)

3.4.3. Procedure

Trained enumerators approached university teachers and employees of various organizations in Islamabad and Rawalpindi. The data was collected using demographic sheets and KAP (Knowledge, Attitudes, and Practices) survey. Following a brief introduction by the researcher, all participants were asked to read and sign an informed consent form. They were informed that their participation was voluntary and that they have the right to withdraw at any point during the study without any consequences.

*3.4.4. Pilot Stud*y

The pilot study for the quantitative phase was conducted to test the feasibility and reliability of the research instruments before administering them on a larger scale and also procedure for the data collection. Four questionnaires were included: Neurodiversity Attitudes Questionnaire (NDAQ), the Autism Knowledge Questionnaire (AKQ), the ADHD- knowledge, and the Neurodiversity Inclusion in Practice Scale (NIPS). Data for the pilot was collected from a sample of university teachers (n=30) and employees (n=40) based in Islamabad and Rawalpindi. The primary objectives to ensure the questionnaire used are comprehendible by the participants and test the initial level of reliability. Results showed good reliability of all questionnaire and participants didn't reported any issues in the words and no problem was encountered in the data collection procedure.

3.4.5. Data Analysis Plan

The analysis was carried out in three steps, beginning with descriptive statistics, followed by correlation analysis, and concluding with regression modeling to address the study objectives. **Descriptive Statistics** were first conducted to provide an overview of the data and to summarize the baseline characteristics of the study participants. Frequency distributions and measures of central tendency and dispersion (e.g., means, standard deviations, and percentages) were used to describe demographic variables such as age, gender, years of professional experience, type of institution (public vs. private), and discipline. In addition, descriptive analyses outlined patterns in the understanding, attitudes, and practices of university teachers and employers regarding the inclusion of neurodivergent individuals. These analyses highlighted general trends in awareness levels and inclusive behaviors across groups. **Correlation analysis** was then performed to examine the relationships among the three primary variables of interest: knowledge, attitudes, and practices related to neurodivergent inclusion. Pearson or Spearman correlation coefficients (depending on the data distribution) were computed to assess the strength and direction of these relationships. Correlational analyses also explored how these variables varied across participant characteristics, such as gender, institutional affiliation, or role (teacher vs. employer).

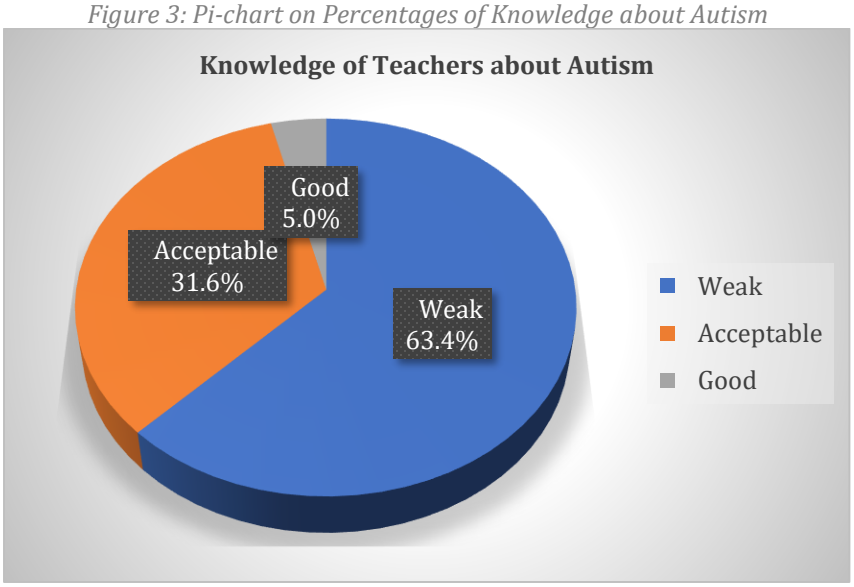
RESULTS

The preliminary results for the university teachers shows that there are equal number of male and female teachers participate in the study, most of them are public university and private university and 25 % are from semi-government universities of Islamabad and Rawalpindi, most of them are between the age of 30-39, are married, with the teaching experience of 0-9years, and majority of the participants do not have any contact with neuro-diverse person earlier.

4.1. Quantitative Analysis from University Teachers' Data

The figure shows that most of the university teachers have very low level of knowledge and only few (5.0 %) have good knowledge about symptoms, myth and diagnosis of autism.

Figure 3: Pi-chart on Percentages of Knowledge about Autism



Source: Authors' computations.

Table 3 provide detail description of the profile of university teachers who participated in this study.

Table 3: Frequency and Percentage of Demographic Characteristics of Participants

Participants Characteristics	*F*	Percentage %
Gender		
Male	169	47.0
Female	191	53.0
Institution Type		
Public University	165	45.0
Private University	108	30.0
Semi-Government	92	25.0
Age		
20-29 years	91	27.2
30-39 years	149	44.6
40-49 years	71	18.7
50+ years	21	5.5
Marital Status		
Single	132	36.2

Married	224	61.4
Divorced/Separated	7	1.9
Widowed	2	0.5
Teaching Experience		
0-9 years	222	66.3
10-19 years	88	26.3
20-29 years	33	6.9
30+ years	2	0.6
Previous Contact with Neurodiverse Family Member		
Yes	78	22.5
No	268	77.5
Previous Contact with Neurodiverse Student		
Yes	54	14.8
No	311	85.2

Note. N=380.
Source: Authors' computations.

Results in table 4 reported psychometric properties of all of the questionnaires use in this study, which are (0.71-0.92). the range of the results shows that most of the participants have below average knowledge on autism and ADHD.

Table 4: Psychometrics Properties for Autism Knowledge Questionnaire, ADHD Knowledge Scale, the Neurodiversity Attitudes Questionnaire and Neurodiversity Inclusion in Practice Scale

Scale	M	*SD*	Cronbach's α
Autism Knowledge Questionnaire	11.82	6.25	0.85
ADHD Knowledge Scale	9.42	5.48	0.84
Neurodiversity Attitudes Questionnaire	103.01	13.53	0.71
Neurodiversity Inclusion in Practice Scale	46.68	13.17	0.92

Note. M=Mean, SD=Standard Deviation.
Source: Authors' computations.

The results of the table 5 shows knowledge about autism and ADHD, and attitude towards neurodiversity has positive and significant correlation with inclusive practice. Moreover, composite scores of attitude shows did not have significant relationship with knowledge about autism and ADHD however, subscale of medical model has significant negative and listening and reflecting subscale shows significant positive relationship with knowledge about autism. Furthermore, knowledge about ADHD and has positive significant relationship with diversity inclusion and listening reflecting sub scale.

Table 5: Spearman Correlation of Knowledge, Attitude and Practice (University Teachers)

Measure	*M*	*SD*	1	2	3	a	b	c	d	e	4	a	b
1.Autism Knowledge	12.14	5.73	-										
2.ADHD Knowledge	0.35	0.20	.24**	-									
3. Attitude	3.67	48.00	.23**	0.08	-								
a. Diversity Inclusion	3.82	0.63	.14**	.13**	.79**	-							

b. Fitting In	3.44	0.94	.14**	0.01	.17**	0.007	-						
c. Cross Neur Interaction	3.93	0.94	0	0.05	.72**	.53**	-.31**	-					
d. Medical Model	3.12	0.71	.17**	-0.09	.37**	.11*	.33**	-.11**	-				
e. Listening Reflecting	4.05	1.05	.25**	.17**	.71**	.49**	-.26**	.67**	-.13**	-			
4.. Practice	2.01	0.57	.11**	.24**	.16*	.11*	0.08	0.07	0.04	.14**	-		
a. Institutional Accommodation and Support Structure	2.27	0.68	.34**	.17**	0.06	-0.003	0.04	0.01	0.09	0.04	.89**	-	
b. Instructional Inclusion and Teachers Preparedness	1.79	0.61	.24**	.28**	.22**	.20**	.11*	.13*	-0.01	.21**	.88**	.57**	-

Note. ** p < .01, * p < .05.
Source: Authors' computations.

Table 6 explain the overall profile of the employees from different sectors. Results shows that most of the employees who completed the survey of this study were young adults between the age of 18-30 years (60%), males (61%), single (52.1), most of them are in private sector, are in their early career (60.7%), most of them donot have any contact with neurodivergent people in workplace (30%) and in family (27.5%).

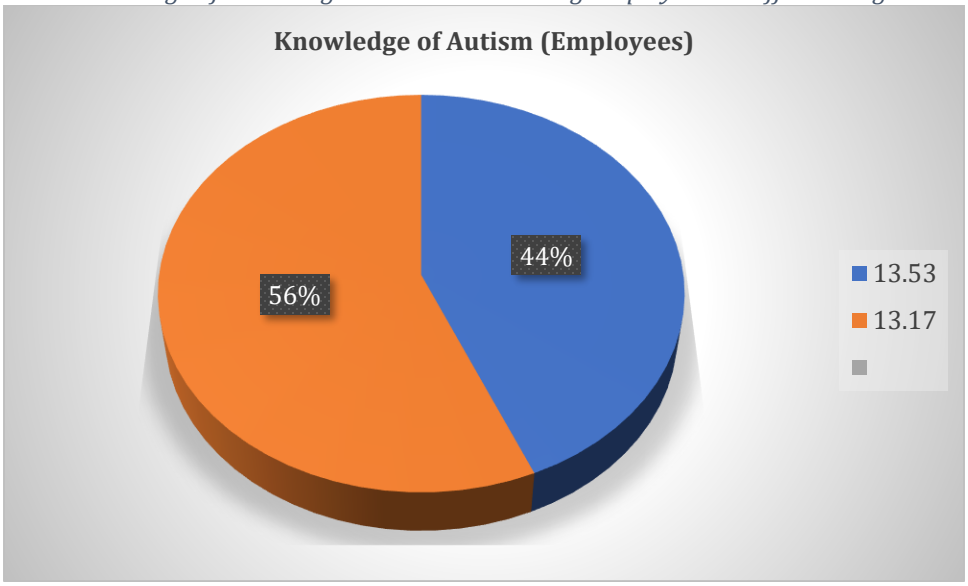
Table 6: Demographic Characteristics of the Employees from Different Organizations

Variables	**N**	**%**	**Variables**	**N**	**%**
Age			Responsible Team Member		
18-30 years (Young)	170	60.7	Yes	92	32.9
31-45 years (Middle-aged)	73	26.1	No	181	64.6
46-57 years (Older)	19	6.8	Responsible for N Team Members	134	47.8
Gender			Important Decisions Work		
Male	171	61.1	Yes	213	76.1
Female	106	37.9	No	65	23.2
Marital Status			Hiring Decisions Work		
Single	146	52.1	Yes	120	42.9
Married	124	44.3	No	160	57.1
Divorced/ Separated	3	1.1	Importance of Teammates Role		
Widowed	1	0.4	Yes	239	85.4
Institution Type			No	41	14.6
Public	54	19.3	Previous Contact with Coworker		
Private	203	72.5	Yes	84	30
Government	21	7.5	No	196	70
Primary Financial Provider			Previous Contact with Family		
Yes	109	38.9	Yes	77	27.5
No	151	53.9	No	202	72.1

Experience (in years)			Participant Physical or Mental Health Disclosure		
0-5 (early-career)	170	60.7	Yes	13	4.6
6-15 (mid-career)	60	21.4	No	267	95.4
16-35 (highly experienced)	26	9.3			
Time in Current Position (in years)					
1-5 (short tenure)	181	64.6			
6-12 (moderate tenure)	27	9.6			
13-22 (long tenure)	5	1.8			

Source: Authors' computations.

Figure 4: Percentage of Knowledge about Autism among Employees in Different Organizations



Source: Authors' computations.

Table 7: Correlation among Study Variables (Employment Sectors)

Variable	**1**	**2**	**3**	**a**	**B**	**C**	**d**	**E**	**4**	**a**	**b**
1. Autism Knowledge	-										
2. ADHD Knowledge	.73**	-									
3. NDAQ Total Score	0.08	0.04	-								
a. Diversity & Inclusion	0.07	0.07	.72**	-							
b. Fitting In	-.2**	-0.1	-0.12	-.17**	-						
c. Cross-Neurotype Interactions	.14*	0.07	.63**	.36**	-.59**	-					
d. Medical Model	0	0	.25**	-0.03	.24**	-.25**	-				
e. Listening & Reflecting	0.11	0.04	.72**	.39**	-.47**	.68**	-.21**	-			
4. Practice Total	.36**	.31**	.15*	.12**	-.17*	.22**	-0.06	.23**	-		
a. Institutional Accommodations & Support Structure	.35**	.34**	0.08	0.06	-.17**	.17**	-0.01	.14*	.94**	-	
b. Institutional Inclusion & Employees Preparedness	.30**	.20**	.22**	.14*	-.14*	.23**	-0.07	.29**	.92**	.75**	-

Source: Authors' computations.

4.2. Findings of Case Study of Mother of Autistic Child and Practitioners

The interviewee journey began through her personal experience as a parent of an autistic child, which led her to train in relationship-based and natural play therapies. She established her own clinic focusing on adolescents, young adults, and their families, emphasizing that autism intervention had to involve the entire family system for meaningful outcomes. In discussing her son's progress, she noted improvements in emotional regulation and communication through assistive spelling apps, while acknowledging the lack of suitable work and learning spaces for individuals like him in Pakistan.

The interviewee noted the absence of structured autism policies in Pakistan, stating that existing frameworks were outdated and still categorized autism as "mental retardation." She identified major challenges:

- Lack of awareness and training in the government sector.
- Limited teacher competence in handling neurodivergent students.
- Frequent bureaucratic turnover that hindered policy continuity.
- Stigma and exclusion faced by autistic individuals and their families.

She proposed a multi-tiered policy framework consisting of:

- Launching large-scale campaigns through television and media to normalize autism and promote public understanding.
- Providing practical, hands-on, and repeated training for teachers and practitioners to improve communication and classroom integration for autistic students.
- Encouraging collaboration between public and private organizations to train educators and include autistic children in vocational and educational programs.
- Involving parents, autistic adults, and professionals in independent committees to ensure consistent representation and protect policymaking from government reshuffling.
- Establishing audit committees and helplines to monitor therapy centers, prevent malpractice, and safeguard the rights and well-being of autistic individuals.

She also highlighted adult autism, noting that many adults remained undiagnosed or hid their diagnosis due to stigma, which affected social integration, employment, and marriage prospects. Symptom manifestations often included anger, social awkwardness, and OCD-like tendencies. Positive examples from Karachi included government-run autism centers, monthly stipends for parents, and inheritance protection laws for autistic individuals. She urged replication of these initiatives nationwide. She called for sustainable systems rooted in awareness, education, and inclusivity, stressing that only when teachers, parents, and policymakers understood autism could meaningful change occur in Pakistan's social and legislative landscape.

4.3. Findings of Interview from Government Official Involve in the Establishment of Government Autism Center and Working on Inclusion Policy

Dr. AX, a medical doctor (MBBS) with specialized training in autism and a Master's degree in Public Health, shared valuable insights into the current state of autism care and support provided by her the government institution she works at. She mentioned how her interest in autism began and how her career evolved overtime. She provided a comprehensive overview of both the progress made and the systemic gaps that continue to hinder effective long-term support for individuals on the autism spectrum.

According to Dr. AX, there has been commendable progress in early intervention and policy development for young children with autism. Structured programs and clear frameworks are in place, allowing families to access a range of benefits designed to ease their daily lives. She mentioned that level of care provided by these institutions is different in all provinces as after 18th amendment the provinces make their own decisions. She discussed the system of federal government under which she works and which has considerable structure with trained professionals. She shared that families of children with autism are provided with official documentation (e.g., CNIC and certificate) that can be used to avail benefits such as reduced travel costs and fee waivers in educational institutions. These initiatives, she noted, reflect a growing recognition of the needs of children with developmental differences and an intent to make education and healthcare more inclusive.

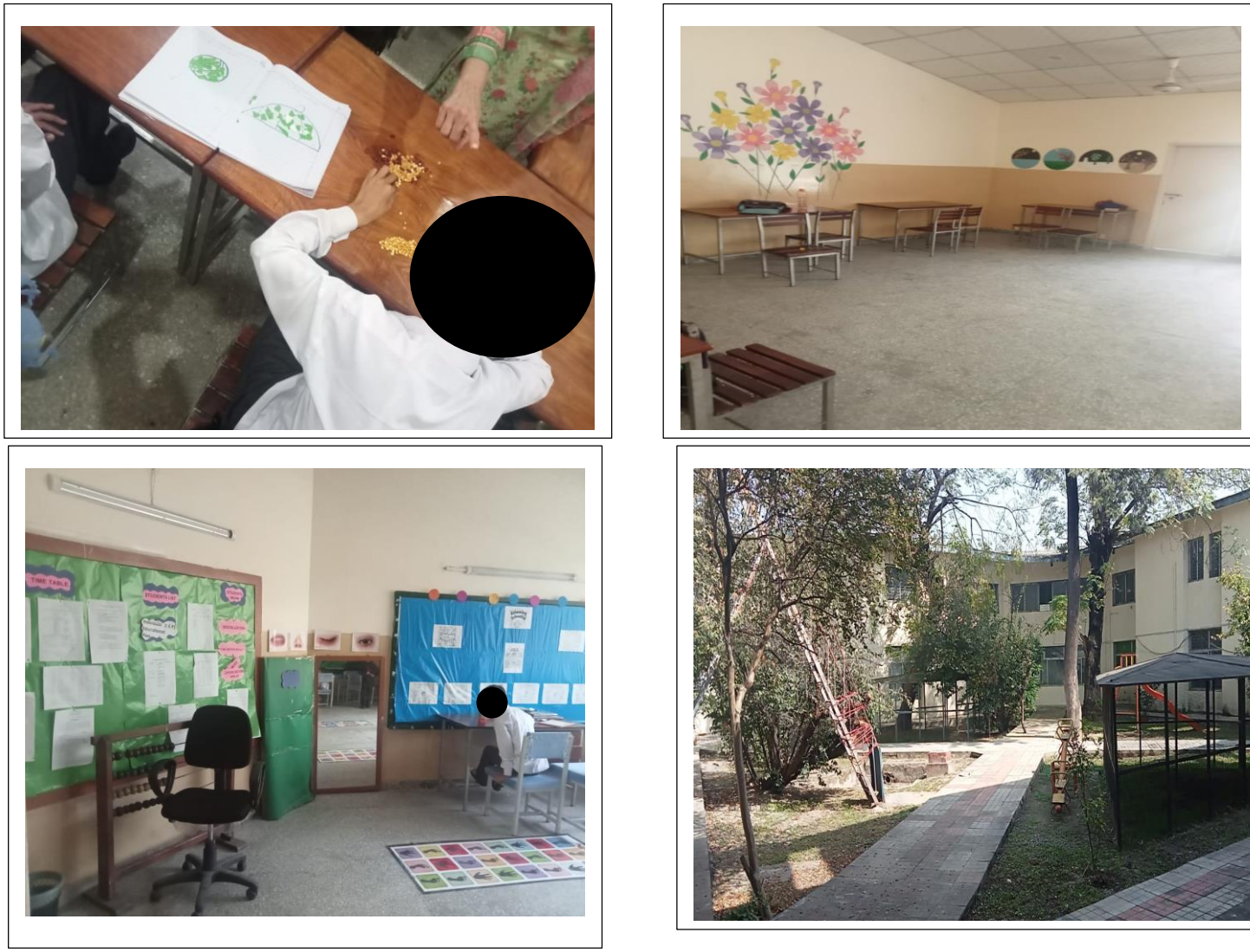
Dr. AX highlighted a crucial gap in the system the complete withdrawal of structured support once individuals with autism turn 18. The organisation where she works, like many others, is restricted to working with children and adolescents, leaving adults with autism largely unsupported. This, she stressed, is a critical period when individuals require continued assistance to transition into independent living, higher education, or employment. The absence of such support often leads to regression or isolation, undermining the progress made during earlier interventions. Curriculum she and her colleagues have developed is for children and adolescents, also their trainings are also focused on school teachers. She mentioned that she didn't know if any university ever contacted for teacher training, even if they did maybe that communication was just between the senior officials as she didn't know any trainings being conducted at university level.

She also discussed several persistent challenges within the system. While general awareness about autism has improved over the years, attitudinal barriers remain deeply entrenched. Teachers who undergo training often fail to adopt inclusive and encouraging practices in the classroom, resulting in environments that can feel dismissive or discouraging for neurodivergent students. Furthermore, cultural stigma continues to pose significant obstacles many parents hesitate to acknowledge that their child may have developmental differences. This denial frequently delays diagnosis and intervention, reducing the chances of optimal developmental outcomes.

Dr. AX emphasised that addressing these challenges requires not just awareness but a transformation in attitudes among educators, parents, and society at large. She concluded that a sustainable system of care must extend beyond childhood, offering consistent, lifelong support to individuals with autism so they can thrive, contribute meaningfully, and live with dignity. She suggested that national campaigns should be launched also she strongly believes in the motto of "Nothing about us without

us" emphasizing that if any policies are to be created, that should include neurodivergent individuals. She also mentioned that she didn't believe that anything will change until neurodivergent individuals and their parents start speaking up for themselves.

Figure 5: Autism Autism Center in Islamabad



Source: Authors' computations.

4.4. Triangulation

The triangulation across different method, data and stakeholder will be conducted (Campbell et al., 2020) to understand the link between challenges faced by neurodiverse youngsters and practice followed by university teachers and employers in different organization. Triangulation is done at different level for instance, (1) on the mean scores of university teacher's knowledge about autism, attitude towards neuro-diverse youngsters, neurodiversity inclusion in practices questionnaires and verbatim of young adults diagnosed with autism, (2) scores of relationship of between knowledge

with practice questionnaire subscale (Institutional Accommodations and Support Structures & Instructional Inclusion and Teacher's Preparedness), verbatim of young adults diagnosed with autism, parent and experts, (3), scores of employees on knowledge, attitude and practice and verbatim of young adults with autism.

The basis for the integration of the findings are attitude knowledge and practice of teachers about neuro-diverse youngsters and perception of youngsters diagnosed with autism about challenges and problems based on knowledge, attitude and practice at higher education level. The matching and combination of the findings follows the pattern mention in the table 8, 9, 10 (See Appendixes). The results show that verbatim of youngsters diagnosed with autism compliments the quantitative findings which shows that teachers don't have knowledge of autism thus don't have inclusive practice in classrooms.

DISCUSSION

The purpose of this study was to examine how neurodivergent young adults experience inclusion in higher education and employment in Pakistan, and to explore the knowledge, attitudes and practices of university teachers and employees who shape these environments. Summary of quantitative results. In summary, qualitative data highlighted consistent themes and patterns. Overall, teachers and employers showed limited knowledge of autism and ADHD-a gap which influenced their attitudes and practices. Neurodivergent young adults described experiences of stigma. They also discussed challenges around disclosure of diagnosis. They reported receiving diagnoses later in life and there was a pattern of missed diagnoses during childhood and adolescence. Neurodivergent young adults also perceived poor knowledge in teachers and people around them about austism and ADHD, which amplified difficulties. Alongside this a consistent theme was the structural exclusion or lack of structural inclusion experienced by neurodivergent individuals, due to which there was another persistent theme of withdrawal from universities and higher education. The findings of this study highlight a complex interplay of social, institutional and structural barriers which shape the education and employment experiences of autistic and ADHD youngsters in Pakistan.

Faculty and employers who were more aware of neurodivergence adopted positive attitudes towards inclusion. This in practice translated into supportive approaches such as allowing flexible deadlines or meeting sensory needs. Conversely poor knowledge tended to reinforce negative assumptions resulting in a lack of or tokenistic or inconsistent accommodation. This aligns with findings of the previous studies that suggest that knowledge plays an integral role in translating policy into practice within real-life settings (Clouder et al., 2020; Van Hees et al., 2015). Furthermore, it was found that a general lack of knowledge among professionals in our study is reflected in earlier research from Pakistan. This indicates knowledge gaps about Autism and ADHD are widespread even in health care system. In this regard Rahbar et al. (2011) identified that only a minority of Karachi's general practitioners demonstrated adequate knowledge to identify autism. These gaps have also been documented at higher education faculties, where studies have identified that staff acknowledge the importance of supporting students with disabilities but often without the training, resources and frameworks to translate these intentions into an effective practice (Naz et al., 2024a; Naz et al., 2024b; Mohsin & Aamir, 2023). From this perspective experiences of neurodivergent young adults in the present study reflect systemic knowledge deficiencies that are consistent with broader national patterns.

Individual interviews with young adults showed that many participants shared the experience of a late or delayed diagnoses. Formal diagnosis did not come until late adolescence or early adulthood which significantly reduced early intervention opportunities and targeted supports. This often compounded academic and social challenges with students struggling with unrecognized differences in learning and attention. These findings support international evidence that late identification of neurodivergent conditions increases the likelihood of stress, anxiety and disengagement in higher educational settings. International literature also indicated that late identified students were at a higher risk for stress, anxiety and disengagement in higher education (Scott et al., 2019; DuPaul et al., 2009). The most dominant theme from these interviews were the stigma associated especially with disclosure of diagnosis. Young adults were hesitant to tell their diagnosis to faculty or employers

because they thought that they would be discriminated against, misunderstood, or be regarded as less competent. Stigma surrounding neurodiversity has been consistently mentioned in international literature as the main reason why people do not disclose their conditions and do not get accommodations (Anderson et al., 2017; Lindsay et al., 2019). This can prevent them not only from getting accommodations but also might lead to isolation and less participation in academic and workplace settings.

Our results show that structural obstacles to higher education and work are significant barriers to the inclusion of neurodivergent young adults. Many universities lacked formal policies, resources, and assistive technologies which resulted in inconsistent implementation of accommodations at universities. Similarly, workplace accommodations were rarely formally instated and depended on individual goodwill rather than institutional frameworks. The absence of systemic supports is in line with previous studies from Pakistan that present a fragmented institutional response, an absence or shortage of training and the underdeveloped policy implementation (Hussain et al., 2022; Naz et al., 2024a; Bokhari et al., 2025). One important implication of these gaps is high risk of higher education dropout and occupational under-employment. The participants reported that academic failures, social isolation, or job instability had resulted from the lack of meaningful supports. These common experiences underline the impacts of lack of knowledge, negative attitudes, stigma and structural exclusion, which create the educational and occupational pathways of neurodivergent young adults. Creating inclusive environments and providing selective accommodations can be very effective in improving the retention of students (Austin & Pisano, 2017; Mezzanotte, 2020).

Our findings make a strong case for multi-level interventions to achieve actual inclusion. At policy level: Neurodiversity should be recognized openly by the National frameworks and, consequently, structural accommodations should be imposed at the educational and employment levels. At an Institutional level: Universities and organizations have to contribute to funding for awareness training, infrastructure that is accessible to all, and systematic support mechanisms. Lastly, an enabling culture that diminishes stigma and encourages disclosure is crucial for the translation of knowledge into effective practice.

Collectively, these results point to the fact that in most of the higher educational and employment settings in Pakistan, knowledge is lacking, while attitudes and practices consequently place the neurodivergent individuals at higher risk for unintentional exclusion. Structural support needs to be prioritized in order to create environments that allow neurodivergent individuals to flourish. This therefore brings into light the broader relevance of the social model of disability, which situates inclusion not in remediating individual deficits but in the transformation of environments to accommodate diverse cognitive styles (den Houting, 2019; Dwyer, 2022).

4.1 Study Limitations and Future Recommendations

The major limitation of the study is that qualitative sample including young adults diagnosed with autism and ADHD who were at the level of one in diagnosis were selected for interview. Future research may also include those young adults who were unable to reach to higher education due to their and study their problems. Moreover, for the employees' data, only few sectors including service

and education was targeted, future research collect data from other sectors and also include other neurodiverse youngsters.

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APPENDIX

Table 8: Triangulation for University Teacher's Mean Scores on Knowledge, Attitude and Inclusion

	Knowledge	**Attitude**	**Practice**
Quantitative Score	**Autism (M= 12.14) (Week= 63.4%)**	**(M=103.4)**	**(M=46.48)**
ASD Participant	• Faculty were polite but not trained for autism (A-09)	• Some teachers were understanding when I quietly explained I was autistic, but others thought I was just shy or uninterested (A-2).	• Faculty often treated me like any other student, which sometimes worked, but other times it made things harder like when I needed clear, step-by-step instructions instead of vague directions. There's little concept of personalized support here, so I had to figure things out on my own (A-06).
Verbatim	• I remember that since childhood, I was a different child, my behaviors were very different for my parents or the people around me. But no one ever noticed that I was different…..When you're autistic, change can be very difficult for you, and you often have rigid boundaries. But people don't notice these things because they are not educated enough to recognize or understand them (A-15)	• Teachers almost find it weird you are asking these questions (A-14)	• Faculty also wasn't particularly good. If studies were concerned, then their stance was very strict like if it's like this, then it has to be this way and even in terms of fee, there was no leeway. You just have to do what everybody else is doing, mostly that was the attitude (A-08).
	• People think autism only affects children or that it's something extreme, like someone who can't talk. There's no awareness about high-functioning autism or Asperger's in adults, especially women. (A17)	• My teachers never addressed it that semester and after that I just lost hope in my university ever helping me and I just pushed through, so no, not really academically, I never received any support. (A-08)	• My attendance in clinical postings was 100%, but because I forget things, when I went to take the ward test I couldn't remember anything. Then the sir said in front of the teacher, "You must not have studied. (A-06)
Triangulation	The results from questionnaires and verbatim of the young adults with autism shows that indicate that university teachers have limited knowledge about autism which is also reflected in the weak practical implementation of inclusive practice in class room. . Although their attitudes toward autistic students tend to be moderately positive, this has not translated into effective support or accommodations. The verbatim accounts of autistic students further reinforce these findings, as many reported that teachers lack adequate understanding of their needs and, at times, even dismiss or silence them when they request reasonable accommodations. The difference between moderate attitude towards neurodiverse youngsters and poor knowledge and practice highlighted critical need for the targeted training and capacity building for faculty to foster genuine inclusion in higher education.		

Source: Authors' computations.

Table 9: Academics (Relationship between Autism Knowledge and NIPS (Practice) Sub Dimensions) (Teachers)

Practice Scale Dimensions	Quantitative scores ASD Knowledge	Autistic Young Adults Verbatim	Parent and Practitioner Verbatim	Experienced/ Policy (SE) Verbatim
Institutional Accommodations and Support Structures	0.11**	· And if they need, like they get these discounts and everything, like as per HEC rules and everything, they get a discount if you're on the disability quota. Because my admission was on regular quota, so that's why my fees are not It's not discount. I haven't got any of these discount privileges and all that, but but I remember the, ABC (person name) you came on the regular quota, you'll be because you submitted your certificate, so you'll still be treated like a, if you were on the disability quota, minus the fee discount (A-05).	· There isn't any policy. It's like, there is no policy at all, to be very honest. Maybe it exists on paper, but at least in the federal area, there's no policy. I think people back in Punjab and Sindh are doing way better than in the federal area. In the federal area, I was also part of this initiative, which was done by a private think tank and they were working (PPI)	· Now the government (at school level) has mandated that every class should have one non neurotypical student but even then it has changed nothing. They are just there but not being included actually. Then these children ultimately leave because they are learning nothing. You know even at our center there is discrimination, you would find it interesting but those students who have hearing impairments would not like these students being included with them (SE-GO)
		· No, mostly because I've not also brought it up to any concerned authorities. But then again, are there any concerned authorities out there? (A-09)		· A lot of parents just worry that oh now my child isn't doing anything. A few of them send for the vocational training but most of them are just out if the system. Whereas I believe that that's the point when the child is done with the school that they need support the most (SE-GO).
		· Nah, they don't even have the concept of that specifically at a XXX School. Absolutely not.(A-13)	· Our document is a very poorly designed document which does not make sense at all because up till now they have not removed autism from the category of mental retardation. So that's the first and foremost thing. So beyond this, I cannot even go into policy.	· One of the teachers we know has been trying her students to appear for matriculation exam but the students are failing certain subjects. She has requested and we have also negotiated with the board to just let these students take an alternative subject which is suitable for these students. We are pushing very hard and so far....let's see what happens.
		· Every university shows that they prioritize mental health, and they mostly organize sessions about it, but on a deeper level, none of them actually do anything meaningful. They just offer		· We have a board that has just started giving that. Earlier if was only for physical disability but from a few months I have seen them give the certificate for autism as well……We then go through those and do some background checks

		basic health services for physical health issues, and even that at a very minimal level. They see mental health as something excluded or separate (A15).		and a few procedures to establish our own observation and then the certificate is given which you can use for fee waiver or for travelling. You know the ticket concessions are there.
		· No, nothing specific. They had general counseling, but it wasn't autism-specific. (A-F-17)		
		· I don't think so, I have, um I think outside Pakistan I know collectives or some, you know, places where they are very outward with this like "oh we focus on neurodivergent people" or "we include them in accessibility" but I don't know any in Pakistan. (A-F-08)		
		· No, not at all. They don't even give support to students that ask for mental health accommodation, or something, so no. (A-F-14)		
Instructional Inclusion and Teacher's Preparedness	0.34**	· And still, I would say that even the university people weren't educated enough to consider this kind of thing. I mean, they might be educated and have degrees and all, but when it comes to this matter, they wouldn't consider it. Their main mindset is still the same. So when it comes to accommodations or even basic health-related needs, I don't think they ever understood them. (A15)	• So I feel that even in the government, the biggest problem is first awareness, they don't even know	• We have this curriculum designed for these students. It is focused on their needs. It is designed in a way that it is easier for the teachers to implement it. We do offer trainings on how to use that. So we have that for all classes till tenth. I think other provinces have that too, other provinces have developed their own.
		· I think there was one policy and they did have like a mental health counsellor. Like when my diagnosis happened, a few months after that I did try scheduling time with her, but her timing was very weird in between when our classes were going on and between those classes, like taking out half an hour, my	• If you want to start such a program, we will come, we will train your teachers. We will tell them how to work with the children, at what pace to take them, how to break things down. So we are available to help you train your	• Give them noise cancelling headphones if it is too much for them. Break their assignments into chunks, give them clear instructions. Even if the university cannot give them those resources, ask them to bring their own resources which can help them with studying. Teachers should try to understand, create peer support groups. Let there be a student among their own class helping them. Pair them with

		slots would always clash with hers or she wouldn't be available, or her slots were really hard to get. So I think that never really worked out. (A-F-08)	teachers. Because first of all, their teachers need to have an understanding of what autism is, and secondly, they need to know that with autistic children, unlike teaching a neurotypical child where you show something once and the child sees it and does it, with these children you have to break it into many very small steps and show them repeatedly.	someone as we do you seat a good student next to a weak one and try to create a bond. Go beyond the typical ways and try to listen what they want. Have sensory friendly areas where they can go and relax. It all depends on how you want to help. In Pakistan as I mentioned earlier it isn't like teachers don't have understanding, we do trainings but still they don't get included because the teachers have certain attitude. I always tell the parents nothing will happen till you take a stand (SE-GO)
		· It was a bit tricky because the department did not have specific guidelines or there were specific accommodations in place.So, like, a lot of the times when I would approach my instructors, they wouldn't really know what to do either, and there was a lot of flipping out to do. (A-F19)		
Triangulation	Results shows that university teachers knowledge about autism is significantly positively related to two subscales of neurodiversity inclusion practice scale i.e., Instructional Inclusion and Teacher's Preparedness and Institutional Accommodations and support Structures. The magnitude of the Instructional Inclusion and Teacher's Preparedness is greater than Institutional Accommodations and support Structures. On the other hand, qualitative data from young adult with autism, parent and government official explained and nuance-checked these associations. The verbatim of young adult with autism e.g., "Some teachers want to support, but they don't know how" and "they don't even know about university policies," illustrate a pattern where individual willingness exists but competence and procedural awareness are lacking. This pattern is reinforced by the parent and practitioners saying that "teachers and institutions don't have knowledge" and describing support as inconsistent and person-dependent. A complementary layer is added by the Government officials by stated that the government had developed certificates for neurodiverse people, while curricular inclusion efforts were concentrated at the school level and not at higher education. This policy positioning explain why institutional accommodation systems in universities are weaker and that there is no clear top-down curricular mandate or higher-education-level certification/training requirement for faculty. Triangulating across methods therefore yields three converging insights: firstly is that the knowledge matters which means that higher knowledge about autism is associated with better instructional inclusion at the individual level, secondly, knowledge alone is insufficient and without institutional policies, clear procedures, and higher-education–specific curricula/training, individual knowledge does not reliably convert into consistent, structural support, and lastly, policy gap government focus on school-level curriculum and certification for neurodiverse people leaves a systemic void at the tertiary level, which helps explain the weaker institutional accommodations scores. Together the quantitative associations and qualitative verbatim suggest that interventions should combine faculty knowledge building with institution-level policy, infrastructure, and higher education tailored curriculum reforms.		

Source: Authors' computations.

Table 10: Employment-Autism (Relationship between Autism Knowledge and Neurodiversity Attitude Sub Dimensions)

Variables	Mean and Standard Deviations	ASD Participant Verbatim (Support)	Parent and Practitioner Verbatim	Experienced/ Policy (SE) Verbatim
Knowledge	M=0.49(14.82) SD=0.233	I told my manager after some time. He was supportive but admitted he didn't fully understand autism. I haven't told all my co-workers because I worry they might treat me differently or pity me. (A-F-17)	I personally know quite a few of them who belong to different sets of socio-economic strata of life. One or two of them shared with me that even though they know they are autistic, they don't tell anybody because, like one of the autistic people, I wouldn't call him a student even though he's in his 30s, I met him and his biggest problem was that he was not getting married even though he was earning well, like a six- figure salary. He was an entrepreneur, running his own business, and the minute anyone came to know he was on the spectrum, the girl would refuse to marry him. Eventually, because he was not highly articulate and socially a bit awkward, and because he didn't like to rush into things, he stopped telling people he was autistic because something so important to him, his marriage, was not happening	See what happens here is that once the child is out of the school all that support gets withdrawn. Now they are left on their own. A lot of parents just worry that oh now my child isn't doing anything. A few of them send for the vocational training but most of them are just out if the system. Whereas I believe that that's the point when the child is done with the school that they need support the most. The institutions have curriculums you know and they follow it, once out of school designed for them the system is too different, a lot of them aren't able to cope.
Attitude	M=100 SD=9.82	Very low. They think autism is like what they see in movies—either a genius or someone who can't speak. I'm neither. So I just come off as difficult or cold. One colleague once said I have "no social battery" and that I made meetings awkward. (A-20)	yes, adults are being diagnosed, but it requires a lot of courage from the individuals themselves because these are people who came on their own, not brought by their families. Families usually don't want this association, but these individuals had the courage to seek assessment.	

Practice	M=21.80	They responded really nicely. Again, they were not from particularly Pakistan. They are South Asian, but they're not from Pakistan, so they were nice about it, they were... Yeah, the entire institution, I feel like, works in a way where neurodivergent people have worked before, so they know how to deal with it as well (A-09)	There is another autistic adult I worked with; he was a Mechatronic engineer from Semi-Government University in Islamabad, but he could not find any job in any company because nobody would allow him to be part of their team. He was very open about it, telling everyone he needed certain space where he would not get distractions. I was so proud of him because he used to advocate for himself so well, but even with him, he was handled very badly. He got a job in a government institute but was so traumatized by that experience that he left everything, stayed home, and said he didn't want to do anything, he just wanted to stay home and not meet anyone. So yes, adult autistic people are there, but	
a. Institutional Inclusion & Employees Preparedness	SD=6.82	My manager gave me clear written instructions and allowed short breaks, which helped a lot. Some colleagues became friendlier; others just avoided the topic (A—F17).	they don't disclose themselves much because of the stigma associated with it in Pakistan. Even jobs they could do are not being given to them.	
		I think one co-worker was from one of my mutual friends, so at my last job they knew about it, and they were also neurodivergent so it was easy for me. It was a very, I think, friendly environment, neurodivergent-friendly also at my last job, because I would want to turn off the overhead lights and my co-worker also wanted to turn off the overhead lights, and we both used to turn them off and nobody would say anything. They would be very		

		nice and very accommodating. "Oh, you're feeling hot now? Turn off the AC. Feeling cold?" I had issues with temperature regulation, so they would listen to me. So I think yeah, one person knew (A-F-08)		
b. Institutional Accommodations & Support Structure	M=23.75 SD=8.33	It's a non-profit organization it's an international non-profit organization. So my mentor who I was working under, I also told them about it, the entire diagnosis thing, and they were really nice about it. Yeah, I have not been having any trouble in that part. (A-9) This last workplace, the one I got fired from, no understanding, no awareness, treated very poorly (A-F-08)		
Triangulation	Results from quantitative data from employees and qualitative information from young adults diagnosed with autism, practitioner and government person showed a mixed and insightful picture and understanding about the inclusion of neurodiversity youngsters in workplace setting. For instances, overall mean scores of employees on knowledge, attitude and inclusive practice shows that employees have moderate level of understanding about autism, reported neutral to positive attitude towards neurodiversity and presence of institutional structure to support neurodiversity and inclusion. However, these scores suggested that there is a need for improvement in autism related knowledge, structural accommodations and implementable policies at organization level. Furthermore, experiences of young adults diagnosed with autism, practitioner and government person add important layers of nuance in these findings. Some young adults reported that employees are welcoming and they do have policies yet most of them said that people in organization most of the time donot know about policies and how to work with the neuro-diverse employees. Practitioners and government person reported that autistic adult face many challenges during job entry and retention due to unrealistic expectations, demand at job, limited awareness. They further reported that organizations mostly lack individual support system, autism informed management practices which are the main cause of stress among neuro-diverse youngster which result into job discontinuation. Overall, triangulation shows that employees do have positive attitude towards neurodiverse youngster but sustainable practices and proper trainings and structure accommodation practice would improve inclusion in work place.			

Source: Authors' computations.