Integrating Individual Strengths and Workforce Structures: An Exploratory Study on Autistic Employment Alignment

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ABSTRACT:

Autism is increasingly viewed through a neurodiversity perspective that emphasizes strengths rather than deficits, particularly in employment. However, misalignment between autistic individuals' strengths and job demands continues to hinder sustainable employment. This study examines how structured alignment among the skill profiles of autistic individuals aged 18–30 years, employer expectations, and sectoral workforce demands influences employment outcomes. The study highlights sector-specific pathways, organizational readiness, and adaptive workforce practices. Primary data were collected from 310 autistic students, autistic employees, and employers across information technology, service, manufacturing, and emerging sectors. Results showed a significant association between strength profiles and employment pathways ($\chi^2 = 18.74$, $p = 0.004$), with employer readiness and structured alignment significantly enhancing sustainable employment outcomes.

Keywords: Autism Spectrum Disorder, Neurodiversity, Inclusive Employment, Employer Readiness, Kerala

1. Introduction

Inclusive employment has become a key priority in workforce development, organisational sustainability, and socio-economic equity as knowledge- and skill-based economies increasingly recognise the value of human capital diversity (Chaudhry, I. S., Paquibut, R. Y., & Tunio, M. N. 2021). Within this context, neurodiversity has emerged as an important dimension of workforce inclusion, with autism increasingly viewed through a strengths-based perspective rather than a deficit model. Autistic individuals often demonstrate valuable cognitive and behavioural strengths, including analytical reasoning, pattern recognition, attention to detail, systematic thinking, and sustained focus, which align well with many structured and skill-intensive occupations (Devenish, B. D., et al. 2022). Nevertheless, unemployment and

underemployment remain disproportionately high because recruitment systems and workplace practices frequently fail to align these strengths with organisational requirements (Wen, B., et al. 2024; Abeysekara, S. P., et al. 2025).

Globally, organisations and governments have introduced autism-inclusive employment initiatives, particularly in technology and service sectors, demonstrating that employer readiness, workplace accommodations, and role-specific alignment improve employment sustainability (Spoor, J. R., et al. 2021; Johnson, K. R., et al. 2020). However, existing research largely examines individual skills, employer attitudes, or policy interventions independently, with limited attention to their combined influence across sector-specific employment pathways (Morris, R., et al. 2025). Organisational readiness, inclusive recruitment, and adaptive workplace practices remain critical determinants of successful employment integration (Maras, K., et al. 2021; Thorpe, D., et al. 2024).

In India, despite advances in disability policy and education, employment opportunities for autistic individuals continue to be constrained by limited employer awareness, fragmented support systems, and inadequate structured employment pathways (Sagar, E., et al. 2024). Kerala provides a particularly relevant setting due to its skilled workforce, high literacy, and expanding information technology, manufacturing, service, and digital sectors, although autism-inclusive employment practices remain inconsistent across industries (Bincy, J., & Thomas, S. M. 2022). Therefore, this study develops and empirically validates an alignment framework linking autistic individuals' skill profiles, employer expectations, and sectoral workforce demands to sustainable employment outcomes, providing evidence-based guidance for strengthening autism-inclusive employment in Kerala's high-growth industries.

2. Related Works

(Day et al. 2025) examined employer-related factors influencing the hiring of autistic adults in the United Kingdom using a large-scale survey of 1,212 employers. Guided by the Theoretical Domains Framework (TDF) and COM-B model, the study found generally positive hiring intentions but identified limited autism awareness, inflexible recruitment practices, and workplace-fit concerns as major barriers. (Goldfarb et al. 2024) analysed employment distribution among 1,115 autistic adults in the Netherlands and reported higher representation in information technology, healthcare, and public sectors, with gender and education influencing sectoral placement. (Bury et al. 2024) identified four long-term employment trajectories among autistic adults, showing that education, health status, and demographic factors significantly affected employment stability, while job–skill mismatch remained unexplored. (Vincent et al. 2024) reported that autistic graduates entered diverse employment sectors but continued to experience lower full-time employment and earnings than their peers.

(Mhlekwa et al. 2023) highlighted major challenges during school-to-work transition, emphasizing limited vocational preparation and employment support. (Stratton et al. 2023) found that disability severity and depressive symptoms, rather than autism severity or IQ, significantly influenced vocational disability and work absences. (Davies et al. 2023) identified recruitment barriers including social-skill-focused hiring, disclosure concerns, and inflexible recruitment practices. (Roux et al. 2023) demonstrated that publicly funded employment services reached only a small proportion of autistic adults requiring support despite increasing vocational rehabilitation utilization. (Espelöer et al. 2023) reported that autistic adults required structured workplace adjustments and continued to face difficulties obtaining suitable employment despite high educational attainment. Finally, (Cope et al. 2022) identified key workplace strengths, including creativity, sustained attention, honesty, reliability, and strong memory, highlighting the valuable contributions autistic individuals can make to organisations.

Collectively, these studies provide important evidence on employment barriers, workforce

participation, recruitment practices, and workplace support. However, they largely examine these dimensions independently, with limited integration of autistic strengths, employer expectations, and sector-specific workforce demands. This highlights the need for an evidence-based alignment framework that systematically connects individual competencies with labour market requirements to promote sustainable and inclusive employment.

2.1 Research Gap

Existing research on the employment of autistic individuals has examined recruitment barriers, employment rates, sectoral participation, and vocational support. However, important gaps remain in understanding how autistic strengths align with evolving labour market skill requirements. Most studies adopt deficit-oriented perspectives, emphasizing employment barriers rather than recognizing autistic individuals as a diverse workforce with valuable skills (Day, M., et al., 2025; Goldfarb, Y., et al., 2024; Roux, A. M., et al., 2023). Although cognitive strengths such as attention to detail, creativity, and sustained focus have been identified (Cope, R., & Remington, A. 2022), they are rarely linked to labour market demands or occupation-specific skill requirements. Existing studies also separately examine employer practices or individual employment outcomes (Davies, J., et al., 2023; Stratton, E., et al., 2023), while longitudinal research reports persistent employment disparities without proposing skill-alignment frameworks (Bury, S. M., et al., 2024; Vincent, J., & Ralston, K. 2024). Similarly, research on vocational transition focuses mainly on workplace accommodations rather than competency–industry mismatches (Mhlekwa, B. S., et al., 2023; Espelöer, J., et al., 2023). Consequently, the literature lacks an integrated approach that aligns autistic strengths with labour market demands and intervention strategies, limiting evidence-based pathways for sustainable and inclusive employment. This gap forms the basis of the present study.

3. Research Questions

i Which high-growth industry sectors and occupational roles demonstrate the strongest alignment with the cognitive, behavioral, and functional strength profiles of autistic individuals?

ii What sector-specific employment pathways and role typologies most effectively utilize the distinctive strengths of autistic individuals in competitive labor markets?

iii What patterns of employer readiness, recruitment practices, and workforce adaptation are associated with successful employment integration of autistic individuals across different industry sectors?

4. Objectives

- To examine sector-specific employment pathways and role typologies that optimally leverage the unique strength profiles of autistic individuals across high-growth industries.
- To analyze employer readiness, hiring practices, and workforce adaptation processes that influence the successful integration of autistic individuals into competitive employment.

5. Proposed Hypothesis

- H_{01}: There is no significant association between the strength profiles of autistic individuals and sector-specific employment pathways or role typologies across high-growth industries.
- H_{11}: There is a significant association between the strength profiles of autistic individuals and sector-specific employment pathways or role typologies across high-growth industries.
- H_{02}: Employer readiness, hiring practices, and workforce adaptation processes do not significantly influence the successful integration of autistic individuals into competitive employment.
- H_{12}: Employer readiness, hiring

practices, and workforce adaptation processes significantly influence the successful integration of autistic individuals into competitive employment.

6. Research Methodology

6.1 Conceptual Framework

Figure 1 presents the conceptual framework of the proposed study.

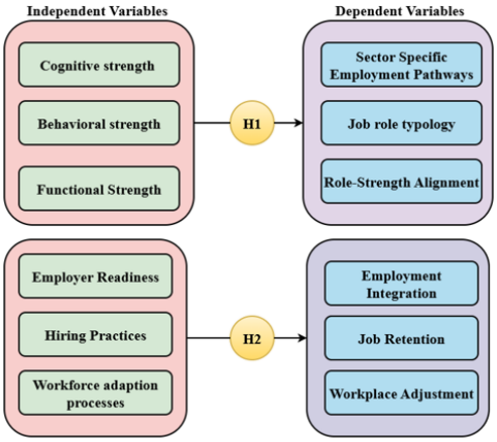

Figure 1. Conceptual framework of the proposed research

6.2 Research Design

The study adopted a mixed-method exploratory–analytical research design to examine the alignment between autistic individuals' strength profiles and job market demands in Kerala. Quantitative data were collected through structured instruments to assess skill profiles, employer readiness, hiring practices, and employment outcomes across high-growth sectors. Qualitative data from stakeholder interviews with employers, educators, and autistic individuals explored sector-specific employment pathways and workforce adaptation. This mixed-method approach enabled triangulation of findings, identifying alignment gaps and role typologies while supporting hypothesis testing and validation of the proposed framework.

6.3 Population and Sample

The study population comprised working-age autistic individuals and employers from high-growth industry sectors in Kerala, selected due to the state's expanding employment opportunities and increasing emphasis on inclusive workforce participation. Autistic individuals who were employed, seeking employment, or enrolled in vocational and skill development programmes formed the primary population, while employers, human resource managers, and supervisors constituted the secondary population, providing perspectives on employer readiness, hiring practices, and workforce adaptation. Cochran's sample size formula was used to determine the required sample size for the large and heterogeneous population. Considering field constraints, respondent accessibility, and the specialized nature of the target population, the final sample size was adjusted to 310 respondents. Purposive sampling ensured inclusion of participants directly relevant to autism-inclusive employment.

6.4 Data Collection

Primary data were collected using structured questionnaires administered to autistic individuals aged 18–30 years, including students preparing for employment, early-career employees, and employers from high-growth sectors in Kerala. Separate questionnaires assessed strength profiles, employment pathways, employer readiness, hiring practices, workforce adaptation, and employment outcomes using a five-point Likert scale. The instruments were developed from established literature, validated through expert review, and refined through a pilot study. Secondary data from government reports, policy documents, and industry publications supported the study. Ethical principles, including voluntary participation, informed consent, confidentiality, and anonymity, were maintained throughout the data collection process.

6.5 Data Analysis

Data were analyzed using IBM SPSS Statistics Version 29.0. Descriptive statistics, including frequencies, percentages, means, and standard deviations, summarized demographic characteristics, skill profiles, employer attributes, and employment outcomes. Cross-tabulation and the Chi-square (χ^2) test examined

associations between strength profiles and sectoral employment pathways. Multiple Linear Regression (MLR) evaluated the effects of employer readiness, hiring practices, and workforce adaptation on employment integration. Regression-based mediation analysis with bootstrapping assessed the indirect effect of alignment on sustainable employment outcomes. Statistical assumptions were verified before analysis, and a significance level of $p < 0.05$ was adopted throughout.

7. ANALYSIS AND FINDINGS

7.1 Analysis of Demographic Profile

Table 1 present the demographic profile of the 310 respondents participating in the proposed study on aligning the strengths of autistic individuals with job market demands in Kerala. The demographic analysis provides an overview of respondent composition and establishes the contextual diversity of the sample.

Table 1. Demographic profile of respondents

Variable	Category	Frequency (n)	Percentage (%)
Respondent Type	Autistic individuals	200	64.5
	Employers / HR professionals	110	35.5
Gender	Male	178	57.4
	Female	132	42.6
Age Group	18–21 years	68	23.2
	22-25 years	97	40.0
	26-30 years	145	25.5
Employment Sector	Information Technology & Digital Services	92	29.7
	Service & Support Industries	74	23.9
	Manufacturing & Technical Services	81	26.1
	Other Emerging Sectors	63	20.3
Employment Status	Employed	168	54.2
	Seeking employment	94	30.3
	Skill training / transition phase	48	15.5

The demographic profile shows that autistic individuals comprised 64.5% of the sample, with employers and HR professionals representing 35.5%, providing both individual and organisational perspectives. Male respondents accounted for 57.4%, while females represented 42.6%, indicating increasing female participation across employment sectors. Most respondents were aged 26–30 years (46.8%), followed by 22–25 years (31.3%) and 18–21 years (21.9%), reflecting individuals transitioning into or beginning employment. Sectoral representation was highest in information technology and digital services (29.7%), manufacturing and technical services (26.1%), and service and support industries (23.9%). Employment status showed that 54.2% were employed, 30.3% were seeking employment, and 15.5% were undergoing skill training, providing a comprehensive basis for examining strength–employment alignment.

7.2 Sector-Specific Employment Pathways and Strength Profile Alignment

7.2.1 Descriptive Statistics of Strength Profiles and Employment Sectors

Figure 2 present the descriptive distribution of respondents across dominant strength profiles and employment sectors.

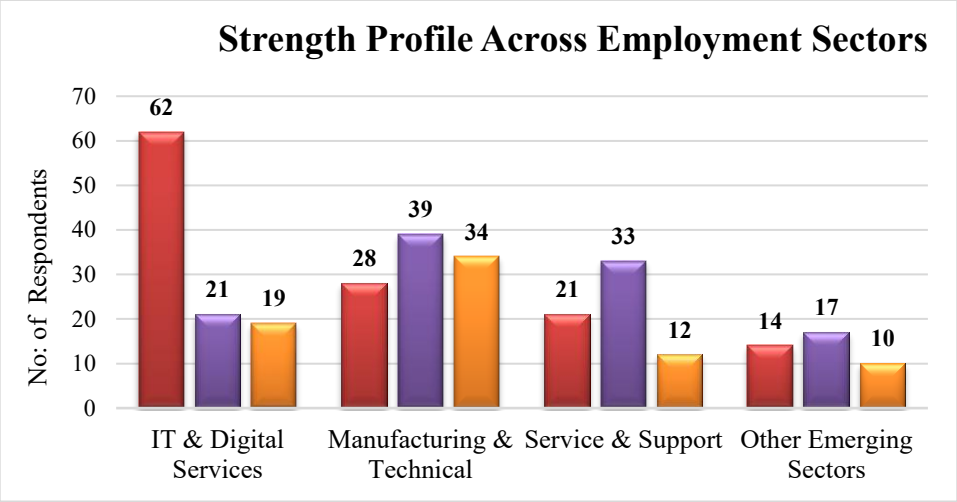

Figure 2. Distribution of strength profiles across employment sectors

The descriptive results show clear variation in strength profiles across employment sectors. Cognitive strengths are most prevalent in the IT and digital services sector (62 respondents), reflecting the demands for analytical reasoning and problem-solving. Behavioral strengths are more common in manufacturing and service sectors, where consistency and task persistence are essential. Functional strengths are relatively evenly distributed, with a slight concentration in technical and manufacturing roles. Overall, the findings indicate that employment sectors align with distinct strength profiles, supporting sector-specific role differentiation.

7.2.2 Chi-Square Test of Association Between Strength Profiles and Employment Pathways

The findings of the Chi-square analysis are given in Table 3.

Table 3. Chi-Square Test of Association Between Strength Profiles and Employment Pathways

Statistic	Value
Chi-square value (χ^2)	18.74
Degrees of freedom	6
Asymptotic significance (p-value)	0.004

The Chi-square test showed a significant association between autistic individuals' strength profiles and sector-specific employment pathways ($\chi^2 = 18.74$, df = 6, $p = 0.004$). The findings indicate that employment sectors differ in their alignment with cognitive, behavioral, and functional strengths, supporting sector-based role differentiation. Accordingly, the null hypothesis (H_{01}) is rejected and the alternative hypothesis (H_{11}) is accepted.

7.3 Employer Readiness, Hiring Practices, and Workforce Adaptation as Predictors of Employment Integration

7.3.1 Multiple Linear Regression Analysis

The results of the multiple regression analysis are showed in Table 4.

Table 4. Multiple Linear Regression Results Predicting Employment Integration

Predictor Variable	Unstandardized β	Standard Error	Standardized β	t-value	p-value
Constant	1.214	0.183	—	6.63	<0.001
Employer readiness	0.368	0.056	0.412	6.57	<0.001
Hiring practices	0.241	0.061	0.276	3.95	<0.001
Workforce adaptation processes	0.189	0.054	0.221	3.50	0.001
Model summary: $R = 0.681$, $R^2 = 0.464$, Adjusted $R^2 = 0.459$, $F(3, 306) = 88.37$, $p < 0.001$					

The regression model explained 46.4% of the variance in employment integration ($R^2 = 0.464$). Employer readiness was the strongest predictor ($\beta = 0.412$, $p < 0.001$), followed by hiring practices ($\beta = 0.276$, $p < 0.001$) and workforce adaptation ($\beta = 0.221$, $p = 0.001$). These findings indicate that successful employment integration depends on coordinated organizational readiness, inclusive recruitment, and adaptive workplace practices. Accordingly, H_{02} is rejected and H_{12} is accepted.

8. CONCLUSION

The study contributes to understanding how autistic individuals' strengths can be aligned with job market demands in Kerala's high-growth sectors, particularly for individuals aged 18–30 years transitioning into employment. A significant association was found between strength profiles and sector-specific employment pathways ($\chi^2 = 18.74$, $p = 0.004$). Organizational factors explained 46.4% of the variance in employment integration ($R^2 = 0.464$), with employer readiness emerging as the strongest predictor. Mediation analysis confirmed alignment as a key mechanism linking skill profiles to sustainable employment outcomes ($\beta = 0.23$, 95% CI [0.14, 0.33]). The findings highlight the importance of coordinated alignment across individual, organizational, and sectoral levels and provide practical guidance for employers, policymakers, and vocational institutions. Future research should validate the framework through longitudinal, sector-specific, and policy-level studies.

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