



# Multi-informant International Perspectives on the Facilitators and Barriers to Employment for Autistic Adults

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Employment rates for autistic individuals are poor, even compared to those from other disability groups. Internationally, there remains limited understanding of the factors influencing employment across the stages of preparing for, gaining, and maintaining employment. This is the third in a series of studies conducted as part of an International Society for Autism Research (INSAR) policy brief intended to improve employment outcomes for autistic individuals. A multi-informant international survey with five key stakeholder groups, including autistic individuals, their families, employers, service providers, and researchers, was undertaken in Australia, Sweden, and the United States to understand the facilitators and barriers to employment for autistic adults. A total of 687 individuals participated, including autistic individuals ( $n = 246$ ), family members ( $n = 233$ ), employers ( $n = 35$ ), clinicians/service providers ( $n = 123$ ), and researchers ( $n = 50$ ). Perceptions of the facilitators and barriers to employment differed significantly across both key stakeholder groups and countries, however, ensuring a good job match and focusing on strengths were identified by all groups as important for success. Key barriers to employment included stigma, a lack of understanding of autism spectrum disorder (ASD) and communication difficulties. Results suggest that a holistic approach to employment for autistic individuals is required, aimed at facilitating communication between key stakeholders, addressing attitudes and understanding of ASD in the workplace, using strength-based approaches and providing early work experience. *Autism Res* 2020, 00: 1–20. © 2020 International Society for Autism Research, Wiley Periodicals, Inc.

**Lay Summary:** Autistic individuals experience significant difficulty getting and keeping a job. This article presents a survey study involving autistic individuals, their families, employers, service providers and researchers in Australia, Sweden, and the United States to understand their perspectives on the factors that support or act as barriers to employment. While perspectives varied across key stakeholders, strategies such as using a holistic approach, targeting workplace attitudes and understanding, focusing on strengths, and providing early work experience are important for success.

**Keywords:** autism; cross-cultural; employment; key stakeholders; adults

## Introduction

While employment rates of the general population in Australia, Sweden and the United States of America (USA) exceed 70% (Organisation for Economic Co-operation and Development [OECD], 2018), these same employment outcomes are not shared by those with a diagnosis of autism spectrum disorder (ASD). Despite often having a desire to engage in paid employment (Autism Spectrum

Australia [Aspect], 2013), and specific skills, traits, and knowledge beneficial to the workplace [de Schipper et al., 2016; Jacob, Scott, Falkmer, & Falkmer, 2015; Kirchner, Ruch, & Dziobek, 2016; Scott et al., 2018], successfully gaining and maintaining employment are key challenges facing autistic individuals. In Australia and the United States, only 40.8% and 38% of autistic individuals respectively are gainfully employed [Australian Bureau of Statistics, 2017; Roux, Rast, Anderson, & Shattuck, 2017], with

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just over half of autistic adults in Sweden in employment (62%) [Statistics Sweden, 2015].

Core characteristics associated with ASD [American Psychiatric Association, 2013] may pose significant challenges across all stages of employment including preparing for, gaining and maintaining employment. When seeking employment, the social and communicative impairments associated with ASD may contribute to difficulties engaging in traditional job search and interview processes [Lorenz, Frischling, Cuadros, & Heinitz, 2016; Robertson, 2010; Scott, Girdler, & Falkmer, 2015], with further environmental factors, such as stigma potentially negatively influencing employment prospects [Unger, 2002]. While some autistic individuals successfully gain employment, there is evidence that negative experiences are pervasive [Baldwin, Costley, & Warren, 2014], and many face challenges in sustaining employment. Difficulties in social interaction and communication, sensory processing atypicalities [Hurlbutt & Chalmers, 2004], challenges understanding task requirements [Lorenz et al., 2016; Robertson, 2010], employer and colleague attitudes [Unger, 2002], and the workplace setting [Lorenz et al., 2016] are all factors identified as hindering the long-term success even when work task performance is adequate [Hurlbutt & Chalmers, 2004].

While factors influencing employment outcomes for autistic individuals have been identified [Chen, Leader, Sung, & Leahy, 2015], there remains little understanding of both the facilitators and barriers to employment across the stages of preparing for, gaining and maintaining a job. Employment research to date has largely focused on examining the significance of the core challenges of ASD in influencing vocational prospects [Scott, Milbourn, et al., 2018]; however, there is increasing recognition of the role that factors, such as the environment [Scott, Milbourn, et al., 2018] and the strengths of autistic individuals [de Schipper et al., 2016], play in influencing employment outcomes [Scott, Milbourn, et al., 2018].

There is a need to develop a holistic understanding of the factors that may facilitate or hamper employment outcomes for autistic individuals across all stages of employment to inform policies and interventions that support autistic adults in employment. As part of a larger policy brief effort commissioned by the International Society for Autism Research (INSAR), this study aimed to inform recommendations for improving the employment outcomes of autistic individuals. This policy brief was conducted across Australia, Sweden and the United States to capture the differing employment and disability policies employed by these countries as described in more detail in Black et al. [2019]. In brief, these countries represent a range of approaches to employment supports for autistic individuals, ranging from highly centralized, with substantial nationalized institutional support (Sweden) to

highly variable, with considerably decentralized policies (United States) [Organisation for Economic Cooperation and Development, 2010]. Thus, these countries present a broad range of approaches, even among otherwise highly resourced and industrialized nations. The present study was preceded by a scoping review of factors impacting employment for autistic people [Scott, Milbourn, et al., 2018] and community consultation obtaining a cross-cultural perspective of key stakeholders in the employment of autistic individuals [Black et al., 2019]. Using the International Classification of Functioning Disability and Health (ICF), a biopsychosocial framework used to understand health-related functioning [World Health Organization, 2002], these studies identified a number of factors influencing employment, with findings particularly highlighting the role of the environment, impacting employment outcomes. While these preceding studies identified key factors influencing employment outcomes, it remains unknown whether perspectives differ across informant groups. It has been shown previously that responses differ across stakeholder groups when considering research questions related to ASD [Pellicano, Dinsmore, & Charman, 2014] and given the diversity of individuals involved in the employment of autistic individuals, it is likely that perspectives also differ in the context of employment. It is important to capture the perspectives from multiple stakeholders to gain a holistic and comprehensive understanding of the barriers and facilitators to employment for autistic individuals, emphasizing the unique expertise of the autistic individuals and the autistic community in their own experiences. For this reason, this study, the third in this series, undertook a multi-informant international survey, gaining the perspectives of autistic individuals, their families, employers, clinicians/service providers and researchers on the facilitators and barriers to employment for autistic individuals.

## Method

### *Design*

To gain perspectives from a range of key stakeholders internationally, a multi-informant international survey [Kaufmann & Astou Saw, 2014] was undertaken in Australia, Sweden, and the United States with five key stakeholder groups including autistic adults, families of autistic individuals, employers, service providers and researchers examining their perspectives on the facilitators and barriers across the stages of employment for autistic adults. This study is part of a larger project led by the Curtin Autism Research Group (CARG) in Australia, the Center of Neurodevelopmental Disorders at Karolinska Institutet (KIND) in Sweden, Stony Brook

University and the Autism Science Foundation in the United States in collaboration with INSAR.

### *Participants*

Across the three countries a total of 687 individuals participated including autistic individuals ( $n = 246$ ), parents and other family members ( $n = 233$ ), employers ( $n = 35$ ), service providers (including clinicians, educators, service provider managers;  $n = 123$ ), and researchers ( $n = 50$ ). Participants were required to identify as belonging to one stakeholder group, however, if a participant identified as multiple groups (e.g., autistic adult and parent), they could recomplete the survey in the additional role. Recruitment of participants was undertaken through snowball and convenience sampling [Saumure & Given, 2012] led by the participating institutions and research groups in each country. In Australia, participants were recruited by CARG through existing recruitment lists and social media with assistance from the Autism Association of Western Australia. Recruitment was also undertaken through various ASD and disability services in Australia. Similarly, recruitment of participants by KIND in Sweden involved recruitment through the centers network and mailing lists, the Swedish Public Employment Service, and various Swedish-based interest organizations, such as the Autism and Asperger Association. Recruitment in the United States was undertaken via web postings, flyers, and social media, as well as existing mailing lists through Stony Brook University, the Autism Science Foundation, and the Autism Society of America. Across the three countries, researchers in the field of ASD were also invited to participate through advertising by INSAR. Demographic information for all participants is shown in Table 1. Across countries, autistic individuals were comparable on gender distribution, however, differed for age. Family members reporting on their autistic children were similar across countries in regard to their child's age and gender.

### *Ethical Considerations*

This study complied with the Helsinki Declaration [World Medical Association, 2008] and ethical approval was obtained by all sites. In Australia, ethical approval was obtained from the Curtin University Human Research Ethics Committee (HREC: HR141/2014). Ethical approval in the USA was obtained from the Stony Brook Institutional Review Board (CORIHS#: 2017-4108-F). In Sweden, ethical approval was obtained from the Regional Ethical Review Board in Stockholm (reg nr. 2017/1251–31/5).

### *Survey Development*

An international online multi-informant survey was developed by the Australian team to examine perspectives of the facilitators and barriers to employment for autistic individuals and adapted to Swedish and United States contexts by the national teams respectively. Surveys were largely similar across the three countries; however, variations were made to several statements accommodating for cultural and national differences, with the survey designed for Sweden translated to Swedish prior to distribution. Due to variations between countries, only those items where variations did not alter the intended meaning of the statement were included in analysis. The survey was divided into three primary sections.

**Demographic information.** The initial sections of the survey sought to obtain demographic and employment data from the respondents. Demographic questions varied according to the key stakeholder group and were tailored for differences across countries (e.g., employment type).

**Facilitators and barriers to employment.** In order to explore the barriers and facilitators to employment, thirty questions were developed. Using a 4-point Likert scale, participants rated the barriers (*very challenging, challenging, somewhat challenging, not challenging at all*) and facilitators (*very important, important, unimportant, not at all important*) across the stages of preparing for, gaining and maintaining a job. Statements for these questions were developed in collaboration with key stakeholders and researchers in the field of ASD and were designed to be inclusive of personal and body function factors, activity and participation factors and environmental domains of the ICF [World Health Organization, 2002]. Items were divided into three sections based on the stages of employment (refer to Appendix A for an outline of questions) including preparing for, gaining and maintaining employment.

**Viewpoints on successful employment.** To further understand viewpoints on the factors contributing to successful employment for autistic individuals, participants then viewed an additional 36 four-point Likert scale statements (strongly agree to strongly disagree) relating to their agreement on the factors contributing to successful employment. These items were taken from a previous study seeking to understand successful employment in autistic individuals [Scott et al., 2015]. In this previous study, autistic individuals and employers were asked to rank a series of statements ( $k = 52$ ) in regard to importance. For the purposes of the current study, those statements which autistic individuals endorsed or disagreed

**Table 1. Demographic Information**

Stakeholder group	AUS	Sweden	USA	Total	Test of significance
<b>Autistic individuals</b>					
<i>N</i>	77	65	104	246	
Age, years mean (SD)	37.1 (12.4)	41.6 (10.3)	33.7 (12.0)	36.9 (12.11)	
Range min–max years	18–70	20–69	18–70	18–70	$F(2,244) = 9.29, P < 0.01$
Gender, <i>n</i> (%)					$\chi^2(2) = 4.5, P = 0.10$
Male	32 (41.6)	19 (29.2)	47 (45.2)	98 (39.8)	
Female	42 (54.5)	43 (66.2)	52 (50)	137 (55.7)	
Transgender	2 (2.6)	0 (0)	3 (2.9)	5 (2)	
Other	1 (1.3)	3 (4.6)	2 (1.9)	6 (2.4)	
<b>Current employment status, <i>n</i> (%)<sup>a</sup></b>					
Unemployed and not seeking work	6 (7.8)	2 (3.1)	8 (7.7)	16 (6.5)	
Unemployed and seeking work	26 (33.8)	10 (15.4)	23 (22.1)	59 (24)	
Working in supported workshop/business	0 (0)	0 (0)	1 (1.0)	1 (0.4)	
Employed on a casual per-diem basis	9 (11.7)	1 (1.5)	2 (1.9)	12 (4.9)	
Employed on a part-time basis	8 (10.4)	6 (9.2)	19 (18.3)	33 (13.4)	
Employed on a full-time basis	13 (16.9)	17 (26.2)	31 (29.8)	61 (24.8)	
Student	9 (11.7)	4 (6.2)	10 (9.6)	23 (9.3)	
Wage subsidized employment	-	6 (9.2)	-	6 (2.4)	
Other	6 (7.8)	26 (40)	9 (8.7)	41 (16.7)	
<b>Industry, <i>n</i> (%)</b>					
Agriculture, forestry, and fishing	0 (0)	0 (0)	1 (1.0)	1 (0.4)	
Retail trade	5 (6.5)	0 (0)	9 (8.7)	14 (5.7)	
Accommodation and food service	0 (0)	1 (1.5)	7 (6.7)	8 (3.3)	
Transport, postal, and warehousing	1 (1.3)	0 (0)	2 (1.9)	3 (1.2)	
Information media and telecommunications	3 (3.9)	3 (4.6)	5 (4.8)	11 (4.5)	
Financial insurance and services	2 (2.6)	2 (3.1)	1 (1.0)	5 (2.0)	
Rental hiring and real estate services	1 (1.3)	0 (0)	1 (1.0)	2 (0.8)	
Professional, scientific, and technical services	4 (5.2)	2 (3.1)	6 (5.8)	12 (4.9)	
Administrative and support services	6 (7.8)	5 (7.7)	12 (11.5)	23 (9.3)	
Public administration and public safety	1 (1.3)	1 (1.5)	1 (1.0)	3 (1.2)	
Education and training	3 (3.9)	6 (9.2)	10 (9.6)	19 (7.7)	
Health care and social assistance	3 (3.9)	2 (3.1)	11 (10.6)	16 (6.5)	
Arts and recreation services	2 (2.6)	3 (4.6)	3 (2.9)	8 (3.3)	
Other services	4 (5.2)	16 (24.6)	17 (16.3)	37 (15)	
Not applicable or missing	42	24	18	84	
<b>Family member</b>					
<i>N</i>	68	23	142	233	
Age, years (of descendent) mean (SD)	21.3 (6.2)	23.3 (6.3)	20.8 (5.3)	21.2 (5.7)	$F(2,232) = 1.93, P = 0.15$
Range min–max years	6–39	15–41	13–50	6–50	
Gender (of descendent), <i>n</i> (%)					$\chi^2(2) = 4.1, P = 0.13$
Male	53 (77.9)	14 (60.9)	116 (81.7)	183 (78.5)	
Female	14 (20.6)	8 (34.8)	25 (17.6)	47 (20.2)	
Transgender	0 (0)	0 (0)	1 (0.7)	1 (0.4)	
Other	1 (1.5)	1 (4.3)	0 (0)	2 (0.9)	
<b>Current employment status (of descendent), <i>n</i> (%)</b>					
Unemployed and not seeking work	9 (13.2)	2 (8.7)	14 (9.9)	25 (10.7)	
Unemployed and seeking work	12 (17.6)	1 (4.3)	33 (23.2)	46 (19.7)	
Working in supported workshop/business	2 (2.9)	1 (4.3)	3 (2.1)	6 (2.6)	
Employed on a casual per-diem basis	12 (17.6)	2 (8.7)	1 (0.7)	15 (6.4)	
Employed on a part-time basis	3 (4.4)	1 (4.3)	28 (19.7)	32 (13.7)	
Employed on a full-time basis	3 (4.4)	0 (0)	2 (1.4)	5 (2.1)	
Student	24 (35.3)	9 (39.1)	51 (35.9)	84 (36.1)	
Wage-subsidized	-	1 (4.3)	-	1 (0.4)	
Other	3 (4.4)	7 (30.4)	9 (6.3)	19 (8.2)	
<b>Industry descendent is employed in, <i>n</i> (%)</b>					
Agriculture, forestry, and fishing	1 (1.5)	0 (0)	0 (0)	1 (0.4)	
Manufacturing	1 (1.5)	0 (0)	2 (1.4)	3 (1.3)	
Construction	1 (1.5)	0 (0)	0 (0)	1 (0.4)	
Wholesale trade	1 (1.5)	0 (0)	0 (0)	1 (0.4)	

*(Continues)*

**Table 1. Continued**

Stakeholder group	AUS	Sweden	USA	Total	Test of significance
Retail trade	6 (8.8)	1 (4.3)	9 (6.3)	16 (6.9)	
Accommodation and food services	3 (4.4)	1 (4.3)	11 (7.7)	15 (6.4)	
Transport, postal and warehousing	1 (1.5)	2 (8.7)	2 (1.4)	5 (2.1)	
Information media and telecommunications	1 (1.5)	0 (0)	2 (1.4)	3 (1.3)	
Financial insurance and services	1 (1.5)	0 (0)	0 (0)	1 (0.4)	
Professional, scientific, and technical services	1 (1.5)	0 (0)	1 (0.7)	2 (0.9)	
Administrative and support services	1 (1.5)	1 (4.3)	7 (4.9)	9 (3.9)	
Public administration and public safety	0 (0)	1 (4.3)	1 (0.7)	2 (0.9)	
Education and training	0 (0)	0 (0)	3 (2.1)	3 (1.3)	
Health care and social assistance	0 (0)	0 (0)	1 (0.7)	1 (0.4)	
Arts and recreation services	2 (2.9)	0 (0)	3 (2.1)	5 (2.1)	
Other services	3 (4.4)	3 (13.0)	8 (5.6)	14 (6.0)	
Not applicable or missing	45	15	91	151	
Employers					
<i>N</i>	9	14	12	35	
Total number of employees	60	86	131	277	
Employment type (number of employees), <i>n</i> (%)					
Supported employment	30 (50)	20 (23.3)	8 (6.1)	58 (20.9)	
Per-diem/casual basis	3 (5.0)	5 (5.8)	13 (9.9)	21 (7.6)	
Part-time basis	9 (15.0)	12 (14.0)	49 (37.4)	70 (25.3)	
Full-time basis	18 (30)	11 (12.8)	61 (46.6)	90 (32.5)	
Wage-subsidized	-	38 (44.2)	-	38 (13.7)	
Industry, <i>n</i> (%) <sup>b</sup>					
Agriculture, forestry, and fishing	1 (11.1)	0 (0)	0 (0)	1 (2.9)	
Manufacturing	0 (0)	1 (7.1)	0 (0)	1 (2.9)	
Construction	0 (0)	0 (0)	2 (16.7)	2 (5.7)	
Retail Trade	0 (0)	2 (14.3)	1 (8.3)	3 (8.6)	
Transport, postal, and warehousing	1 (11.1)	1 (7.1)	0 (0)	2 (5.7)	
Information media and telecommunications	0 (0)	6 (42.9)	0 (0)	6 (17.1)	
Financial insurance and services	0 (0)	0 (0)	1 (8.3)	1 (2.9)	
Professional, scientific, and technical services	0 (0)	0 (0)	2 (16.7)	2 (5.7)	
Administrative and support services	1 (11.1)	2 (14.3)	1 (8.3)	4 (11.4)	
Public administration and public safety	0 (0)	1 (7.1)	0 (0)	1 (2.9)	
Education and training	1 (11.1)	0 (0)	1 (8.3)	2 (5.7)	
Health care and social assistance	0 (0)	1 (7.1)	0 (0)	1 (2.9)	
Other services	5 (55.6)	2 (14.3)	4 (33.3)	11 (31.4)	
Service providers					
<i>N</i>	21	63	39	123	
Employment types supported, <i>n</i> (%)					
Supported employment	5 (23.8)	36 (57.1)	26 (66.7)	67 (54.5)	
<i>Per diem</i> /casual basis	9 (42.9)	33 (52.4)	10 (25.6)	52 (42.3)	
Part-time basis	9 (42.9)	45 (71.4)	22 (56.4)	76 (61.8)	
Full-time basis	5 (23.8)	32 (50.8)	15 (61.5)	52 (42.3)	
Wage-subsidized	-	52 (82.5)	-	52 (42.3)	
Other	-	6 (9.5)	-	6 (4.9)	
Industry that individuals currently employed in, <i>n</i> (%) <sup>c</sup>					
Agriculture, forestry, and fishing	2 (9.5)	2 (3.2)	1 (2.6)	5 (4.1)	
Manufacturing	4 (19.0)	8 (12.7)	5 (12.8)	17 (13.8)	
Electricity, gas water, and waste service	0 (0)	4 (6.3)	4 (10.3)	8 (6.5)	
Construction	0 (0)	5 (7.9)	1 (2.6)	6 (4.9)	
Wholesale trade	2 (9.5)	7 (11.1)	0 (0)	9 (7.3)	
Retail trade	9 (42.9)	26 (41.3)	14 (35.9)	49 (39.8)	
Accommodation and food services	6 (28.6)	15 (23.8)	23 (59.0)	44 (35.8)	
Transport, postal, and warehousing	6 (28.6)	26 (41.3)	7 (17.9)	39 (31.7)	
Information media and telecommunications	3 (14.3)	33 (52.4)	17 (17.9)	43 (35.0)	
Financial and insurance services	1 (4.8)	3 (4.8)	3 (7.7)	7 (5.7)	
Rental hiring and real estate services	0 (0)	0 (0)	1 (2.6)	1 (0.8)	
Professional, scientific, and technical services	0 (0)	11 (17.5)	9 (23.1)	20 (16.3)	
Administrative support services	7 (33.3)	30 (47.6)	10 (25.6)	47 (38.2)	
Public administration and safety	1 (4.8)	7 (11.1)	0 (0)	8 (6.5)	

(Continues)

**Table 1. Continued**

Stakeholder group	AUS	Sweden	USA	Total	Test of significance
Education and training	0 (0)	7 (11.1)	11 (28.2)	18 (14.6)	
Health care and social assistance	2 (9.5)	17 (27.0)	8 (20.5)	27 (22.0)	
Arts and recreation services	1 (4.8)	13 (20.6)	11 (28.2)	25 (20.3)	
Other services	5 (23.8)	12 (19.0)	7 (17.9)	24 (19.5)	
Researchers					
<i>N</i>	6	0	44	50	

<sup>a</sup>*n* = 6 Swedish participants provided multiple responses.

<sup>b</sup>*n* = 2 Swedish participants provided multiple responses.

<sup>c</sup>Includes multiple responses from all countries.

with most strongly (received highest or lowest rankings) [Scott et al., 2015] were used. Two statements were reversed in Swedish surveys, therefore for the purposes of analysis, scores were reversed for Swedish results.

### Procedure

Online survey tools were used for the purposes of data collection. Qualtrics [Qualtrics, 2005] was used by both Australian and the US sites while Karolinska SUNET Survey was employed in Sweden [Artologik, 2018]. Survey links were distributed by each study site *via* their recruitment avenues. Participants were provided with information outlining the purposes of the study and provided informed consent through the online survey tools prior to proceeding to the survey. While survey completion time varied, completion took approximately 1 hr, with participants able to save their progress and return to the survey at any point in time. Surveys generated Excel and other output files for further data processing.

### Data Analysis

Data were analyzed using SPSS statistical software [IBM Corp, 2015]. Demographic data were examined using nonparametric (Chi square/Fischer's exact, Kruskal-Wallis) and parametric (Analysis of Variance) tests to investigate differences between countries for each respondent group. In examining the differences in perception of those factors important for employment, the frequencies of all responses and respondent groups were extracted, with Kruskal-Wallis H tests conducted on each statement to determine if key stakeholders differed in regard to their perception of facilitators and barriers to employment. Where significant differences were observed, post-hoc Bonferroni-Dunn adjusted pairwise comparisons were undertaken to examine where differences between key stakeholder groups occurred. Analysis was further conducted to explore potential cross-cultural differences in the perception of facilitators and barriers to employment across the three countries. To examine key stakeholder perspectives on viewpoints for successful employment [Scott et al., 2015], frequencies of agreement and

disagreement were calculated for each key stakeholder group for each statement. These frequencies were used to derive rankings for each statement, revealing those items with the highest and lowest levels of agreement.

## Results

### Preparing for Employment

All stakeholders endorsed that matching skills, abilities and interests to the job criteria (good job matching) was the most important factor in regard to preparing for employment. Autistic adults and families responded that employer knowledge of an individual's diagnosis was least important to preparing for employment while learning how to participate in an interview was least important for employers and service providers. Researchers found the statements regarding employer knowledge of diagnosis and learning the skills required to support an autistic person similarly unimportant (Table 2).

**Key stakeholder comparisons.** Both families ( $P < 0.01$ ) and service providers ( $P < 0.01$ ) responded that matching skills, abilities and interests to the job criteria was more important in preparing for employment than did autistic adults (Table 2). Similarly, families ( $P < 0.01$ ), service providers ( $P = 0.01$ ), and employers ( $P < 0.01$ ), reported that employers having knowledge of the autism diagnosis was more important than did autistic adults. Learning how to interview for a job was more important in preparing for employment to service providers ( $P = 0.018$ ) and researchers ( $P = 0.016$ ) in comparison to employers, and to families in comparison to autistic individuals ( $P < 0.01$ ). Families also perceived learning how to interview for a job as less important than did employers ( $P < 0.01$ ).

**Cross-cultural comparisons.** Autistic adults in the United States endorsed employer knowledge of the ASD diagnosis as less important than autistic adults in Sweden ( $P = 0.029$ ) and Australia ( $P < 0.01$ ). Autistic adults in the United States also responded that learning how to interview ( $P < 0.01$ ), and matching skills, abilities and,

**Table 2. Ratings of Importance for Factors Associated with Preparing for Employment and Tests of Significance for Responder Group and Country**

	Very important	Important	Unimportant	Very unimportant	Tests of significance	
					Key stakeholder comparison	Cross-cultural comparison
Employer knowledge of diagnosis					$\chi^2 (4) = 62.15, P < 0.01^*$	
Autistic individual	28.0%	49.2%	19.5%	3.3%		$\chi^2 (2) = 16.64, P < 0.01^*$
Family member	57.9%	34.8%	5.6%	1.7%		$\chi^2 (2) = 14.91, P < 0.01^*$
Employer	62.9%	34.3%	0.0%	2.9%		$\chi^2 (2) = 2.73, P = 0.26$
Service provider	37.4%	59.3%	3.3%	0.0%		$\chi^2 (2) = 3.75, P = 0.15$
Researcher	30.0%	68.0%	2.0%	0.0%		$\chi^2 (2) = 0.07, P = 0.8$
Learning how to interview for a job					$\chi^2 (4) = 32.62, P < 0.01^*$	
Autistic individual	53.3%	36.2%	9.3%	1.2%		$\chi^2 (2) = 11.81, P < 0.01^*$
Family member	73.4%	21.0%	3.4%	2.1%		$\chi^2 (2) = 5.39, P = 0.07$
Employer	37.1%	40.0%	20.0%	2.9%		$\chi^2 (2) = 2.22, P = 0.33.$
Service provider	61.8%	33.3%	4.9%	0.0%		$\chi^2 (2) = 7.97, P = 0.02^*$
Researcher	66.0%	32.0%	2.0%	0.0%		$\chi^2 (2) < 0.01, P = 0.94$
Matching skills, abilities, and interests to the job criteria					$\chi^2 (4) = 28.64, P < 0.01^*$	
Autistic individual	77.1%	19.6%	2.4%	0.8%		$\chi^2 (2) = 10.5, P = 0.01^*$
Family member	92.3%	6.4%	0.4%	0.9%		$\chi^2 (2) = 13.5, P < 0.01^*$
Employer	74.3%	25.7%	0.0%	0.0%		$\chi^2 (2) = 3.99, P = 0.14$
Service provider	91.1%	8.9%	0.0%	0.0%		$\chi^2 (2) = 3.02, P = 0.22$
Researcher	86.0%	14.0%	0.0%	0.0%		$\chi^2 (2) = 0.04, P = 0.84$

\*Indicates significant at  $P < 0.05$ .

interests to the job criteria ( $P < 0.01$ ) were less important in preparing for employment compared to autistic adults in Sweden. Similar to autistic adults, families in the United States endorsed employer knowledge of the diagnosis as less important than did families in Sweden ( $P < 0.01$ ). Matching skills, abilities and, interests to the job criteria was also more important to families in Sweden in comparison to those in Australia ( $P < 0.01$ ) and the United States ( $P < 0.01$ ). Australian service providers ranked learning how to interview as less important in preparing for employment than did service providers in Sweden ( $P = 0.03$ ). Researchers and employers did not differ across countries in their importance rankings of factors relevant to preparing for employment.

**Facilitators in gaining employment.** Autistic adults, families, service providers and researchers responded that learning the skills needed for work (including social skills, life skills, preparing for social norms or vocational training) was the most important factor for gaining employment. Employers considered educating staff about ASD prior to the individual commencing work as the most important factor. Providing training to employers about ASD was the least important factor in regard to preparing for employment in all key stakeholder groups (Table 3).

**Key stakeholder comparisons.** Groups did not differ significantly when considering the importance of training employers about ASD in the workplace. Families responded that work experience (such as internships) and learning job

skills (such as social skills) were less important to gaining employment compared to service providers (work experience:  $P = 0.03$ , job skills  $P = 0.02$ ) and employers ( $P < 0.01$ ), however, they believed these items were more important than did autistic adults ( $P < 0.01$ ). Educating staff about ASD prior to the individual beginning work was also seen as more important to service providers compared to families ( $P < 0.01$ ), while families found this item more important compared to autistic adults ( $P < 0.01$ ).

**Cross-cultural comparisons.** All key stakeholders across Australia, Sweden, and the United States provided similar ratings in regard to the importance of work experience in preparing for employment. In considering learning job skills, autistic adults in the United States perceived this item as less important than their counterparts in Australia ( $P = 0.01$ ) and in Sweden ( $P < 0.01$ ). Employers in Sweden found learning job skills as more important than employers in the United States ( $P = 0.03$ ), while service providers in Sweden also found learning job skills as more important than did service providers in both the United States ( $P < 0.01$ ) and Australia ( $P = 0.01$ ). Educating staff about ASD prior to the individual beginning employment was also seen as more important to employers in Sweden compared to employers in the United States ( $P < 0.01$ ), and to service providers in Australia compared to service providers in Sweden ( $P = 0.01$ ).

Providing training to employers about ASD was found to be more important for autistic adults, families, employers and service providers in Australia compared to

**Table 3. Ratings for Facilitators Associated with Gaining Employment and Tests of Significance for Responder Group and Country**

	Very important	Important	Unimportant	Very unimportant	Tests of significance	
					Key stakeholder comparison	Cross-cultural comparison
Work experience					$\chi^2(4) = 30.02, P < 0.01^*$	
Autistic individual	52.8%	39.4%	6.1%	1.6%		$\chi^2(2) = 0.99, P = 0.61$
Family member	73.4%	23.6%	1.7%	1.3%		$\chi^2(2) = 4.51, P = 0.11$
Employer	42.9%	42.9%	14.3%	0.0%		$\chi^2(2) = 0.22, P = 0.90$
Service provider	54.5%	45.5%	0.0%	0.0%		$\chi^2(2) = 5.82, P = 0.06$
Researcher	54.0%	44.0%	2.0%	0.0%		$\chi^2(2) = 2.33, P = 0.13$
Learning the skills you may need					$\chi^2(4) = 50.54, P < 0.01^*$	
Autistic individual	53.3%	39.8%	6.5%	0.4%		$\chi^2(2) = 25.83, P < 0.01^*$
Family member	82.0%	16.3%	0.4%	1.3%		$\chi^2(2) = 5.03, P = 0.08$
Employer	48.6%	42.9%	8.6%	0.0%		$\chi^2(2) = 6.68, P = 0.04^*$
Service provider	65.0%	32.5%	2.4%	0.0%		$\chi^2(2) = 24.76, P < 0.01^*$
Researcher	70.0%	28.0%	2.0%	0.0%		$\chi^2(2) = 0.59, P = 0.44$
Training employers about ASD					$\chi^2(4) = 4.40, P = 0.36$	
Autistic individual	42.6%	33.2%	6.1%	18.0%		$\chi^2(2) = 127.25, P < 0.01^*$
Family member	54.1%	21.5%	1.3%	23.2%		$\chi^2(2) = 154.65, P < 0.01^*$
Employer	40.0%	42.9%	0.0%	17.1%		$\chi^2(2) = 18.71, P < 0.01^*$
Service provider	39.0%	46.3%	3.3%	11.4%		$\chi^2(2) = 45.29, P < 0.01^*$
Researcher	52.0%	36.0%	2.0%	10.0%		$\chi^2(2) = 16.47, P < 0.01^*$
Educating staff on ASD prior to an employee with ASD beginning in the workplace					$\chi^2(4) = 43.52, P < 0.01^*$	
Autistic individual	44.3%	38.6%	15.0%	2.0%		$\chi^2(2) = 1.01, P = 0.60$
Family member	68.2%	27.9%	3.4%	0.4%		$\chi^2(2) = 3.70, P = 0.16$
Employer	45.7%	51.4%	2.9%	0.0%		$\chi^2(2) = 12.34, P < 0.01^*$
Service provider	38.2%	55.3%	6.5%	0.0%		$\chi^2(2) = 11.19, P < 0.01^*$
Researcher	56.0%	40.0%	4.0%	0.0%		$\chi^2(2) = 2.07, P = 0.15$

\*Indicates significant at  $P < 0.05$ .

those in the USA ( $P < 0.01$ ), but less important compared to those in Sweden (autistic adults, families and service providers:  $P < 0.01$ , employers:  $P = 0.01$ ). Researchers in Australia also found training employers as more important than did researchers in the United States ( $P < 0.01$ ).

#### Barriers for Gaining Employment

All key stakeholders, except autistic adults, endorsed communication skills as the most challenging barrier to employment. In contrast, autistic individuals identified a lack of understanding of ASD in the workplace as the most challenging factor. A lack of knowledge of the employment application and interview process were seen as the least challenging factors for autistic adults, families and employers, while researchers and service providers rated stigma in the workplace as the least challenging (Table 4).

**Key stakeholder comparisons.** Families and autistic adults rated stigma as more challenging than did service providers ( $P < 0.01$ ). Families and autistic adults also found a lack of acceptance in the workplace as more challenging than did both service providers ( $P < 0.01$ ) and

employers (families:  $P = 0.01$ , autistic adults:  $P = 0.03$ ). Families rated the lack of knowledge of the interview and employment process as less challenging than did both employers ( $P = 0.02$ ) and service providers ( $P = 0.01$ ), but as more challenging than did autistic adults ( $P < 0.01$ ). Families also endorsed communication skills as more challenging to gaining employment than did autistic adults ( $P = 0.03$ ). While a significant difference between key stakeholders was observed for understanding of ASD in the workplace, no pairwise comparisons were significant, ( $P > 0.11$ ) indicating that all key stakeholders rated this item similarly.

**Cross-cultural comparisons.** Cross-cultural comparisons showed that family perceptions of the challenges related to gaining employment did not differ across countries. While differences between countries for employers was significant for stigma, pairwise comparisons revealed no significant differences across countries ( $P > 0.07$ ), with all other items being nonsignificant, indicating that employers provided similar ratings on the challenges to gaining employment across countries. Autistic adults in Sweden rated understanding in the workplace as more challenging to gaining employment than did those in

**Table 4. Ratings for Barriers Associated with Gaining Employment and Tests of Significance for Responder Group and Country**

					Test of significance	
	Very challenging	Challenging	Slightly challenging	Not challenging at all	Key stakeholder comparisons	Cross-cultural comparisons
Stigma in the workplace					$\chi^2 (4) = 24.95, P < 0.01^*$	
Autistic individual	51.6%	30.9%	15.0%	2.4%		$\chi^2 (2) = 1.15, P = 0.56$
Family member	46.6%	40.5%	12.1%	0.9%		$\chi^2 (2) = 2.86, P = 0.24$
Employer	22.9%	54.3%	20.0%	2.9%		$\chi^2 (2) = 6.50, P = 0.04^*$
Service provider	27.0%	49.2%	22.1%	1.6%		$\chi^2 (2) = 1.22, P = 0.54$
Researcher	32.0%	50.0%	18.0%	0.0%		$\chi^2 (2) = 3.96, P = 0.05^*$
Acceptance in the workplace					$\chi^2 (4) = 25.96, P < 0.01^*$	
Autistic individual	49.2%	34.0%	14.8%	2.0%		$\chi^2 (2) = 4.98, P = 0.08$
Family member	48.3%	41.8%	8.6%	1.3%		$\chi^2 (2) = 2.73, P = 0.26$
Employer	20.0%	57.1%	20.0%	2.9%		$\chi^2 (2) = 0.90, P = 0.64$
Service provider	27.9%	49.2%	21.3%	1.6%		$\chi^2 (2) = 1.05, P = 0.59$
Researcher	36.7%	53.1%	10.2%	0.0%		$\chi^2 (2) = 1.53, P = 0.22$
Understanding of ASD in the workplace					$\chi^2 (4) = 14.39, P = 0.01^*$	
Autistic individual	56.5%	32.5%	8.9%	2.0%		$\chi^2 (2) = 7.65, P = 0.02^*$
Family member	57.4%	36.5%	5.2%	0.9%		$\chi^2 (2) = 0.08, P = 0.96$
Employer	37.1%	48.6%	14.3%	0.0%		$\chi^2 (2) = 0.04, P = 0.98$
Service provider	41.8%	52.5%	4.9%	0.8%		$\chi^2 (2) = 5.14, P = 0.08$
Researcher	34.7%	59.2%	6.1%	0.0%		$\chi^2 (2) = 1.68, P = 0.20$
Knowledge of employment application interview process					$\chi^2 (4) = 22.68, P < 0.01^*$	
Autistic individual	41.1%	32.9%	23.2%	2.8%		$\chi^2 (2) = 1.90, P = 0.39$
Family member	55.6%	31.5%	9.9%	3.0%		$\chi^2 (2) = 0.86, P = 0.65$
Employer	26.5%	50.0%	17.6%	5.9%		$\chi^2 (2) = 0.48, P = 0.79$
Service provider	31.1%	53.3%	14.8%	0.8%		$\chi^2 (2) = 2.16, P = 0.34$
Researcher	40.0%	46.0%	14.0%	0.0%		$\chi^2 (2) = 0.69, P = 0.41$
Communication skills					$\chi^2 (4) = 12.32, P = 0.02^*$	
Autistic individual	52.4%	34.6%	11.4%	1.6%		$\chi^2 (2) = 0.27, P = 0.87$
Family member	63.8%	31.5%	3.9%	0.9%		$\chi^2 (2) = 1.59, P = 0.45$
Employer	42.9%	42.9%	14.3%	0.0%		$\chi^2 (2) = 0.59, P = 0.74$
Service provider	54.1%	40.2%	4.1%	1.6%		$\chi^2 (2) = 7.95, P = 0.02^*$
Researcher	54.0%	44.0%	2.0%	0.0%		$\chi^2 (2) = 0.02, P = 0.88$

\*Indicates significant at  $P < 0.05$ .

Australia ( $P = 0.03$ ). Service providers in Sweden rated communication skills as more challenging compared to service providers in the United States ( $P = 0.02$ ) and researchers in the United States found stigma more challenging to gaining employment than did researchers in Australia ( $P = 0.05$ ).

#### Facilitators in Maintaining Employment

In regard to maintaining employment, all key stakeholder groups endorsed focusing on strengths in the workplace as the most important factor. Making workplaces more accessible was rated as the least important in maintaining employment by families, services providers and researchers. Employers and autistic adults perceived mentors or external support as the least important factor (Table 5).

**Key stakeholder comparisons.** Families rated education and understanding of ASD in the workplace

( $P = 0.02$ ) as less important than employers ( $P = 0.02$ ). Families ( $P < 0.01$ ) and service providers ( $P = 0.01$ ) also rated mentor or external supports as more important than did autistic adults. Key stakeholder groups did not differ when considering the importance of making the workplace more accessible and friendly. Further, while a significant effect of group was observed for the importance of focusing on the strengths in the workplace, pairwise comparisons revealed no significant differences.

**Cross-cultural comparisons.** Autistic adults in Australia found that making the workplace more accessible and friendly was more important to maintaining employment than did autistic adults in the United States ( $P = 0.04$ ). Families, employers and researchers were found to have similar ratings on the importance of factors relating to maintaining employment across countries. While a significant difference between countries was found for service providers when considering the importance of making the workplace more accessible, no

**Table 5. Ratings for Facilitators Associated with Maintaining Employment and Tests of Significance for Responder Group and Country**

	Very important	Important	Unimportant	Very unimportant	Tests of significance	
					Key stakeholder comparisons	Cross-cultural comparisons
Focusing on their strengths in the workplace					$\chi^2 (4) = 11.53, P < 0.02^*$	
Autistic individual	78.0%	21.1%	0.4%	0.4%		$\chi^2 (2) = 4.13, P = 0.13$
Family member	84.4%	14.7%	0.0%	0.9%		$\chi^2 (2) = 0.94, P = 0.62$
Employer	71.4%	28.6%	0.0%	0.0%		$\chi^2 (2) = 0.17, P = 0.92$
Service provider	72.1%	27.9%	0.0%	0.0%		$\chi^2 (2) = 4.63, P = 0.1$
Researcher	68.0%	30.0%	2.0%	0.0%		$\chi^2 (2) = 0.75, P = 0.39$
Education and understanding of ASD in the workplace					$\chi^2 (4) = 18.09, P < 0.01^*$	
Autistic individual	55.7%	36.6%	6.9%	0.8%		$\chi^2 (2) = 2.08, P = 0.35$
Family member	64.5%	33.3%	1.3%	0.9%		$\chi^2 (2) = 3.07, P = 0.22$
Employer	37.1%	54.3%	8.6%	0.0%		$\chi^2 (2) = 2.78, P = 0.25$
Service provider	48.4%	48.4%	3.3%	0.0%		$\chi^2 (2) = 0.08, P = 0.96$
Researcher	42.0%	56.0%	2.0%	0.0%		$\chi^2 (2) = 1.72, P = 0.19$
Mentor or some form of external support					$\chi^2 (4) = 44.22, p < 0.01^*$	
Autistic individual	49.8%	32.7%	16.7%	0.8%		$\chi^2 (2) = 2.57, P = 0.28$
Family member	75.7%	22.2%	1.7%	0.4%		$\chi^2 (2) = 0.25, P = 0.88$
Employer	54.3%	31.4%	8.6%	5.7%		$\chi^2 (2) = 0.13, P = 0.94$
Service provider	63.1%	35.2%	1.6%	0.0%		$\chi^2 (2) = 5.54, P < 0.03^*$
Researcher	56.0%	42.0%	2.0%	0.0%		$\chi^2 (2) = 0.34, P = 0.56$
Making the workspace more accessible and friendly					$\chi^2 (4) = 4.40, p = 0.35$	
Autistic individual	52.8%	34.6%	12.2%	0.4%		$\chi^2 (2) = 7.70, P = 0.02^*$
Family member	56.3%	39.0%	3.9%	0.9%		$\chi^2 (2) = 1.41, P = 0.49$
Employer	54.3%	40.0%	2.9%	2.9%		$\chi^2 (2) = 2.40, P = 0.30$
Service provider	57.4%	38.5%	4.1%	0.0%		$\chi^2 (2) = 6.85, P < 0.03^*$
Researcher	46.0%	44.0%	10.0%	0.0%		$\chi^2 (2) = 0.55, P = 0.46$

\*Indicates significant at  $P < 0.05$ .

pairwise comparisons were significant ( $P > 0.08$ ), indicating that service providers also provided similar ratings across countries for all factors associated with maintaining employment.

#### Barriers to Maintaining Employment

Communication difficulties were found to be the most challenging barrier to maintaining employment by autistic adults, families, service providers and researchers, while ASD education and understanding in the workplace were seen as the most challenging barrier by employers. Difficulties with communication were rated as least challenging by employers, with service providers and autistic adults finding behavior difficulties (i.e., meltdowns, hand flapping) to be the least challenging. Researchers perceived being able to change tasks if necessary as the least challenging in maintaining employment, while families perceived being able to change tasks if necessary and behavior difficulties as both being least challenging (Table 6).

#### Key Stakeholder Comparisons

Families endorsed both behavior difficulties and communication difficulties as more challenging to maintaining employment compared to autistic adults (behavior:  $P < 0.01$ , communication:  $P = 0.03$ ), but found these items less challenging when compared to employers (behavior:  $P = 0.03$ , communication:  $P < 0.01$ ). Families also found ASD understanding and education in the workplace to be less challenging than did service providers. Service providers rated communication difficulties as more challenging compared to employers ( $P = 0.02$ ) and found being able to change tasks as needed more challenging than autistic adults ( $P = 0.04$ ).

#### Cross-Cultural Comparisons

Autistic adults and service providers in Sweden rated being able to change tasks occasionally as needed as more challenging than did autistic adults ( $P = 0.03$ ) and service providers ( $P = 0.03$ ) in the United States. Service providers in Sweden found that behavior difficulties were less

**Table 6. Ratings for Barriers Associated with Maintaining Employment and Tests of Significance for Responder Group and Country**

	Very challenging	Challenging	Slightly challenging	Not challenging at all	Tests of significance	
					Key stakeholder comparisons	Cross-cultural comparisons
Behavior difficulties					$\chi^2 (4) = 31.08$ $p < 0.01^*$	
Autistic individual	30.6%	41.6%	22.9%	4.9%		$\chi^2 (2) = 2.17$ , $P = 0.34$
Family member	51.3%	34.3%	12.2%	2.2%		$\chi^2 (2) = 5.16$ , $P = 0.08$
Employer	17.1%	65.7%	17.1%	0.0%		$\chi^2 (2) = 0.44$ $P = 0.80$
Service provider	42.1%	41.3%	16.5%	0.0%		$\chi^2 (2) = 12.58$ , $P < 0.01^*$
Researcher	44.0%	46.0%	10.0%	0.0%		$\chi^2 (2) = 3.48$ , $P = 0.06$
Communication difficulties					$\chi^2 (4) = 20.54$ $P < 0.01^*$	
Autistic individual	51.4%	38.0%	9.8%	0.8%		$\chi^2 (2) = 4.62$ , $P = 0.10$
Family member	64.3%	30.0%	5.2%	0.4%		$\chi^2 (2) = 0.31$ , $P = 0.86$
Employer	31.4%	48.6%	20.0%	0.0%		$\chi^2 (2) = 0.45$ , $P = 0.80$
Service provider	56.6%	40.2%	3.3%	0.0%		$\chi^2 (2) = 7.07$ , $P = 0.03^*$
Researcher	56.0%	42.0%	2.0%	0.0%		$\chi^2 (2) = 0.07$ , $P = 0.8$
Being able to change tasks occasionally if needed					$\chi^2 (4) = 12.39$ $P = 0.02^*$	
Autistic individual	30.6%	42.0%	25.3%	2.0%		$\chi^2 (2) = 7.20$ , $P = 0.03^*$
Family member	35.8%	48.0%	15.7%	0.4%		$\chi^2 (2) = 4.15$ , $P = 0.13$
Employer	20.0%	71.4%	5.7%	2.9%		$\chi^2 (2) = 0.67$ , $P = 0.72$
Service provider	41.3%	43.8%	14.9%	0.0%		$\chi^2 (2) = 7.63$ , $P = 0.02^*$
Researcher	22.0%	56.0%	22.0%	0.0%		$\chi^2 (2) = 0.42$ , $P = 0.52$
Understanding of ASD in the workplace					$\chi^2 (4) = 14.03$ $P = 0.01^*$	
Autistic individual	51.4%	31.4%	15.5%	1.6%		$\chi^2 (2) = 1.83$ , $P < 0.40$
Family member	53.7%	36.7%	8.7%	0.9%		$\chi^2 (2) = 2.52$ , $P = 0.28$
Employer	31.4%	51.4%	17.1%	0.0%		$\chi^2 (2) = 4.33$ , $P = 0.12$
Service provider	33.9%	52.9%	13.2%	0.0%		$\chi^2 (2) = 2.60$ , $P = 0.27$
Researcher	38.0%	56.0%	6.0%	0.0%		$\chi^2 (2) = 0.06$ , $P = 0.81$

\*Indicates significant at  $P < 0.05$ .

challenging than service providers in Australia ( $P < 0.01$ ) and the United States ( $P = 0.03$ ), while service providers in the United States perceived communication difficulties to be less challenging than those in Sweden ( $P = 0.03$ ). Families, employers and researchers across countries did not differ significantly when considering barriers to maintaining employment.

#### *Benefits of Autistic Adults in the Workplace*

Autistic adults and employers had the highest agreement ratings for increased attention to detail as a benefit of autistic adults in the workplace, while families, service providers and researchers had the highest agreement ratings for specific skills in niche areas. Families, employers and, service providers had the highest disagreement ratings for low absenteeism, while autistic adults had the highest disagreement ratings for specific skills in niche areas (Table 7).

**Key stakeholder comparisons.** Autistic adults had lower levels of agreement compared to families, service

providers, and researchers when considering both increased attention to detail on tasks (all:  $P < 0.01$ ) and accuracy in work tasks (service providers:  $P < 0.01$ , families:  $P < 0.01$  and researchers:  $P = 0.01$ ). Autistic adults also had lower levels of agreement compared to all other stakeholders (families:  $P < 0.01$ , employers:  $P = 0.01$ , service providers:  $P < 0.01$ , and researchers:  $P < 0.01$ ) for increased attention and high levels of concentration. Family members had lower levels of agreement than service providers for low absenteeism ( $P < 0.01$ ). While a significant effect was observed for niche skills in specific areas, no significant differences between individual key stakeholder groups emerged, suggesting that all groups had similar agreement levels.

#### *Cross-Cultural Comparisons*

Key stakeholders had similar agreement ratings for increased attention to detail, focused attention and high levels of concentration, and specific skills in niche areas. Perceptions of key stakeholders on accuracy in works tasks and low absenteeism however, differed across countries.

**Table 7. Agreement Ratings for Autistic Strengths in the Workplace and Tests of Significance for Responder Group and Country**

	Strongly agree	Agree	Disagree	Strongly disagree	Tests of significance	
					Key stakeholder comparisons	Cross-cultural comparisons
Increased attention to detail					$\chi^2 (4) = 31.29 P < 0.01^*$	
Autistic individual	76.1%	22.2%	1.6%	0.0%		$\chi^2 (2) = 0.36, P = 0.84$
Family member	56.6%	38.2%	3.9%	1.3%		$\chi^2 (2) = 3.66, P = 0.16$
Employer	65.7%	28.6%	5.7%	0.0%		$\chi^2 (2) = 0.78, P = 0.68$
Service provider	53.3%	41.8%	4.1%	0.8%		$\chi^2 (2) = 4.58, P = 0.10$
Researcher	50.0%	44.0%	6.0%	0.0%		$\chi^2 (2) = 0.07, P = 0.79$
Focused attention and high levels of concentration					$\chi^2 (4) = 43.20 P < 0.01^*$	
Autistic individual	67.9%	28.4%	3.3%	0.4%		$\chi^2 (2) = 5.28, P = 0.07$
Family member	50.2%	36.6%	11.9%	1.3%		$\chi^2 (2) = 1.190, P = 0.55$
Employer	40.0%	45.7%	11.4%	2.9%		$\chi^2 (2) = 1.31, P = 0.52$
Service provider	37.7%	50.0%	11.5%	0.8%		$\chi^2 (2) = 4.94, P = 0.09$
Researcher	36.0%	54.0%	10.0%	0.0%		$\chi^2 (2) = 0.31, P = 0.58$
Accuracy in work tasks					$\chi^2 (4) = 36.96 P < 0.01^*$	
Autistic individual	69.1%	28.4%	2.5%	0.0%		$\chi^2 (2) = 6.62, P = 0.04^*$
Family member	46.1%	43.0%	9.6%	1.3%		$\chi^2 (2) = 8.59, P = 0.01^*$
Employer	45.7%	48.6%	5.7%	0.0%		$\chi^2 (2) = 2.45, P = 0.29$
Service provider	46.7%	47.5%	4.9%	0.8%		$\chi^2 (2) = 6.20, P = 0.05^*$
Researcher	42.0%	52.0%	6.0%	0.0%		$\chi^2 (2) = 0.53 p = 0.47$
Low absenteeism					$\chi^2 (4) = 17.68 P < 0.01^*$	
Autistic individual	41.6%	35.0%	21.0%	2.5%		$\chi^2 (2) = 10.39, P = 0.01^*$
Family member	50.0%	35.1%	11.8%	3.1%		$\chi^2 (2) = 2.63, P = 0.27$
Employer	34.3%	37.1%	25.7%	2.9%		$\chi^2 (2) = 6.68, P = 0.035^*$
Service provider	32.8%	33.6%	27.0%	6.6%		$\chi^2 (2) = 22.04, P < 0.01^*$
Researcher	40.0%	44.0%	14.0%	2.0%		$\chi^2 (2) = 0.16, P = 0.69$
Specific skills in niche areas					$\chi^2 (4) = 9.80 P = 0.04^*$	
Autistic individual	75.4%	14.8%	9.8%	0.0%		$\chi^2 (2) = 3.99, P = 0.14$
Family member	65.8%	23.2%	11.0%	0.0%		$\chi^2 (2) = 1.02, P = 0.60$
Employer	62.9%	17.1%	20.0%	0.0%		$\chi^2 (2) = 5.01, P = 0.08$
Service provider	60.8%	30.0%	9.2%	0.0%		$\chi^2 (2) = 1.18, P = 0.56$
Researcher	57.1%	36.7%	6.1%	0.0%		$\chi^2 (2) = 0.02, P = 0.89$

\*Indicates significant at  $P < 0.05$ .

Autistic adults in Sweden had higher agreement ratings than those in Australia ( $P = 0.03$ ) for accuracy in work tasks, while families in Sweden had higher agreement ratings for accuracy in work tasks than families in the United States ( $P = 0.04$ ). While a significant effect for accuracy in work tasks was also found for service providers, no significant differences between countries were found. Autistic adults ( $P = 0.01$ ) and employers ( $P = 0.04$ ) in Sweden had higher agreement ratings for low absenteeism than those in the United States. Service providers in Sweden also had higher agreement ratings for low absenteeism than did service providers both in Australia ( $P < 0.01$ ) and the United States ( $P < 0.01$ ).

#### Viewpoints on Factors for Successful Employment

Table 8 shows the distribution of agreement with viewpoints related to employment for autistic individuals. When considering the top-ranked statements which key stakeholders agreed and disagreed with, it was found that all key stakeholder groups except for families had high agreement ratings for "Being able to work is important

for independence." Autistic individuals and researchers provided high agreement ratings for "It is OK to choose to be alone during the lunchbreak," while both family members and employers provided high agreement rankings for the statement "a good manager assists in resolving conflict between employees to help keep the workplace fair and equal." Family members and researchers had high agreement ratings for the statement "on the job training helps with understanding workplace rules", with families also providing high agreement ratings for "It is important that managers are approachable in the workplace". Autistic individuals provided high ratings for the statement "To be productive at work a thorough understanding of job expectations is essential." Statements including "Commitment to work is a valuable employee attribute" and "Job matching employees to their specific interests motivates work participation" were provided high agreement ratings by employers and services providers, respectively.

All key stakeholders except for autistic individuals had high disagreement ratings for "Working on a regular basis decreases life satisfaction," similarly, all key stakeholders

**Table 8. Agreement Ratings for Viewpoints Associated with Employment for Autistic Individuals (Bold Indicates Top Three Highest Ranking of Agreement or Disagreement for Key Stakeholder Group)**

		Strongly agree	Agree	Disagree	Strongly disagree
It is important that managers are approachable in the workplace	Autistic individual	71.6%	22.2%	6.2%	0.0%
	Family member	<b>72.8%</b>	<b>25.0%</b>	1.8%	0.4%
	Employer	62.9%	31.4%	5.7%	0.0%
	Service provider	48.8%	42.1%	8.3%	0.8%
	Researcher	55.3%	44.7%	0.0%	0.0%
Receiving honest feedback on work performance assists with personal and professional development	Autistic individual	68.7%	28.8%	2.1%	0.4%
	Family member	57.3%	41.4%	0.9%	0.4%
	Employer	57.1%	42.9%	0.0%	0.0%
	Service provider	57.0%	42.1%	0.8%	0.0%
	Researcher	63.8%	36.2%	0.0%	0.0%
Commitment to work is a valuable employee attribute	Autistic individual	68.2%	30.2%	1.2%	0.4%
	Family member	66.1%	32.6%	0.9%	0.4%
	Employer	<b>71.4%</b>	<b>28.6%</b>	0.0%	0.0%
	Service provider	57.0%	42.1%	0.8%	0.0%
	Researcher	52.1%	47.9%	0.0%	0.0%
A good manager assists in resolving conflict between employees to help keep the workplace fair and equal	Autistic individual	69.5%	28.0%	2.1%	0.4%
	Family member	<b>68.2%</b>	<b>30.0%</b>	0.5%	1.4%
	Employer	<b>74.3%</b>	<b>17.1%</b>	8.6%	0.0%
	Service provider	64.1%	35.9%	0.0%	0.0%
	Researcher	60.9%	39.1%	0.0%	0.0%
Being direct with colleagues is helpful when asking work related questions	Autistic individual	59.7%	34.6%	4.9%	0.8%
	Family member	56.8%	41.4%	0.9%	0.9%
	Employer	45.7%	54.3%	0.0%	0.0%
	Service provider	48.8%	47.1%	4.1%	0.0%
	Researcher	27.7%	61.7%	10.6%	0.0%
Regular followup by an employee coordinator during the probation period hinders the work progress	Autistic individual	15.7%	19.4%	47.9%	16.9%
	Family member	25.1%	21.1%	35.7%	18.1%
	Employer	14.3%	14.3%	42.9%	28.6%
	Service provider	14.0%	7.4%	38.0%	40.5%
	Researcher	13.0%	21.7%	52.2%	13.0%
Working on a regular basis decreases life satisfaction	Autistic individual	11.7%	13.0%	39.7%	35.6%
	Family member	6.7%	4.0%	<b>44.8%</b>	<b>44.4%</b>
	Employer	11.4%	2.9%	<b>37.1%</b>	<b>48.6%</b>
	Service provider	5.8%	5.8%	<b>43.3%</b>	<b>45.0%</b>
	Researcher	2.1%	4.3%	<b>42.6%</b>	<b>51.1%</b>
Ongoing support from an employment coordinator limits work performance	Autistic individual	8.3%	12.1%	57.5%	22.1%
	Family member	3.6%	4.0%	<b>51.1%</b>	<b>41.3%</b>
	Employer	8.6%	14.3%	45.7%	31.4%
	Service provider	5.8%	3.3%	48.3%	42.5%
	Researcher	6.4%	0.0%	59.6%	34.0%
Communication skills (e.g., listening when others are talking, responding and interacting to conversations, body language) are important in most workplaces	Autistic individual	58.9%	36.9%	3.7%	0.4%
	Family member	44.8%	23.8%	19.3%	12.1%
	Employer	45.7%	48.6%	5.7%	0.0%
	Service provider	60.8%	32.5%	6.7%	0.0%
	Researcher	55.3%	44.7%	0.0%	0.0%
A support plan for work should only be agreed upon by the employer, not the employee, employment coordinator or any colleagues or managers involved	Autistic individual	11.7%	16.3%	<b>29.2%</b>	<b>42.9%</b>
	Family member	27.2%	17.0%	17.9%	37.9%
	Employer	5.7%	20.0%	37.1%	37.1%
	Service provider	15.0%	20.8%	25.8%	38.3%
	Researcher	8.7%	2.2%	<b>26.1%</b>	<b>63.0%</b>
Being able to work is important for independence	Autistic individual	<b>75.8%</b>	<b>21.7%</b>	2.1%	0.4%
	Family member	63.2%	7.6%	9.9%	19.3%
	Employer	<b>82.9%</b>	<b>14.3%</b>	2.9%	0.0%
	Service provider	<b>78.3%</b>	<b>21.7%</b>	0.0%	0.0%
	Researcher	<b>78.3%</b>	<b>21.7%</b>	0.0%	0.0%
Punctuality is important in the workplace	Autistic individual	61.0%	32.4%	5.8%	0.8%
	Family member	67.1%	30.7%	1.3%	0.9%
	Employer	45.7%	45.7%	8.6%	0.0%
	Service provider	49.2%	41.7%	9.2%	0.0%
	Researcher	44.7%	53.2%	2.1%	0.0%

(Continues)

**Table 8. Continued**

		Strongly agree	Agree	Disagree	Strongly disagree
A good understanding of the workplace culture is important when beginning a new job. i.e., dress code, social etiquette, workplace values, and attitudes	Autistic individual	57.0%	36.8%	5.8%	0.4%
	Family member	60.0%	37.8%	1.3%	0.9%
	Employer	37.1%	54.3%	8.6%	0.0%
	Service provider	56.7%	37.5%	5.8%	0.0%
	Researcher	48.9%	51.1%	0.0%	0.0%
It is important to have the right skills and abilities to contribute to the needs and productivity requirements of the workplace	Autistic individual	56.0%	39.8%	3.7%	0.4%
	Family member	54.0%	43.3%	2.2%	0.4%
	Employer	40.0%	51.4%	5.7%	2.9%
	Service provider	45.0%	48.3%	5.8%	0.8%
	Researcher	41.3%	58.7%	0.0%	0.0%
Job matching employees to their specific interests motivates work participation	Autistic individual	69.8%	26.9%	3.3%	0.0%
	Family member	61.8%	36.4%	1.3%	0.4%
	Employer	55.9%	41.2%	2.9%	0.0%
	Service provider	<b>70.0%</b>	<b>28.3%</b>	1.7%	0.0%
	Researcher	59.6%	40.4%	0.0%	0.0%
Constant high level support from an employment coordinator is required, even when an employee's confidence in work skills increases	Autistic individual	18.7%	35.3%	32.8%	13.3%
	Family member	36.2%	32.6%	28.1%	3.1%
	Employer	17.1%	40.0%	34.3%	8.6%
	Service provider	24.2%	34.2%	35.8%	5.8%
	Researcher	10.6%	27.7%	51.1%	10.6%
Reporting to several different managers, rather than one main manager for work is preferable	Autistic individual	5.4%	7.9%	<b>34.0%</b>	<b>52.7%</b>
	Family member	5.9%	13.5%	48.6%	32.0%
	Employer	0.0%	5.7%	<b>42.9%</b>	<b>51.4%</b>
	Service provider	3.4%	7.6%	<b>41.5%</b>	<b>47.5%</b>
	Researcher	2.1%	4.3%	63.8%	29.8%
It does not matter that employees are motivated by their work <sup>a</sup>	Autistic individual	2.1%	4.6%	<b>27.0%</b>	<b>66.4%</b>
	Family member	1.8%	1.8%	<b>41.0%</b>	<b>55.4%</b>
	Employer	0.0%	0.0%	<b>48.6%</b>	<b>51.4%</b>
	Service provider	1.7%	1.7%	<b>31.4%</b>	<b>65.3%</b>
	Researcher	2.1%	0.0%	53.2%	44.7%
It would be good if an employee could have weekly contact with an employment coordinator to discuss his/her work tasks (e.g., breaking the steps of a big task down into smaller tasks, workplace difficulties)	Autistic individual	29.7%	48.5%	18.4%	3.3%
	Family member	28.7%	36.8%	15.7%	18.8%
	Employer	34.3%	45.7%	14.3%	5.7%
	Service provider	44.1%	49.2%	5.9%	0.8%
	Researcher	34.0%	57.4%	8.5%	0.0%
The lighting of the room can affect an employee's ability to work	Autistic individual	55.0%	37.5%	7.1%	0.4%
	Family member	35.1%	54.5%	8.1%	2.3%
	Employer	20.0%	65.7%	14.3%	0.0%
	Service provider	53.4%	44.1%	2.5%	0.0%
	Researcher	34.0%	59.6%	4.3%	2.1%
It is helpful when the support required from an employment coordinator is reassessed and adjusted after the probation period	Autistic individual	33.3%	61.6%	3.8%	1.3%
	Family member	45.0%	51.8%	1.8%	1.4%
	Employer	28.6%	62.9%	5.7%	2.9%
	Service provider	44.1%	54.2%	1.7%	0.0%
	Researcher	44.7%	53.2%	2.1%	0.0%
Job trials are helpful to demonstrate specific skills required in a workplace	Autistic individual	35.9%	46.8%	13.5%	3.8%
	Family member	40.0%	54.5%	4.1%	1.4%
	Employer	40.0%	48.6%	8.6%	2.9%
	Service provider	47.0%	43.6%	7.7%	1.7%
	Researcher	25.5%	70.2%	4.3%	0.0%
To be productive at work a thorough understanding of job expectations is essential	Autistic individual	<b>70.5%</b>	<b>28.3%</b>	0.4%	0.8%
	Family member	49.1%	47.7%	2.3%	0.9%
	Employer	54.3%	45.7%	0.0%	0.0%
	Service provider	59.8%	38.5%	1.7%	0.0%
	Researcher	57.4%	38.3%	4.3%	0.0%
If required, workplace mentors can give advice on appropriate social behavior	Autistic individual	38.0%	56.5%	5.1%	0.4%
	Family member	46.6%	49.8%	2.7%	0.9%
	Employer	42.9%	57.1%	0.0%	0.0%
	Service provider	53.0%	42.7%	3.4%	0.9%
	Researcher	48.9%	51.1%	0.0%	0.0%

(Continues)

**Table 8. Continued**

		Strongly agree	Agree	Disagree	Strongly disagree
Short, regular breaks during the day interrupt concentration	Autistic individual	16.0%	21.9%	39.7%	22.4%
	Family member	15.5%	18.6%	43.2%	22.7%
	Employer	2.9%	14.3%	57.1%	25.7%
	Service provider	4.3%	19.7%	51.3%	24.8%
	Researcher	4.3%	4.3%	<b>38.3%</b>	<b>53.2%</b>
Education training on autism spectrum disorders for all employed staff is unnecessary in the work environment <sup>a</sup>	Autistic individual	6.3%	25.2%	30.3%	38.2%
	Family member	5.5%	12.7%	45.9%	35.9%
	Employer	8.6%	17.1%	48.6%	25.7%
	Service provider	7.7%	34.2%	34.2%	23.9%
	Researcher	2.2%	4.3%	52.2%	41.3%
The process of finding a job is difficult	Autistic individual	69.9%	20.3%	8.9%	0.8%
	Family member	53.4%	22.2%	11.8%	12.7%
	Employer	65.7%	34.3%	0.0%	0.0%
	Service provider	<b>70.1%</b>	<b>29.1%</b>	0.9%	0.0%
	Researcher	55.6%	42.2%	2.2%	0.0%
Increased support is required for employers and employees when significant changes occur in the workplace (e.g., change in job task, adjustment in work hours, manager is on leave or has resigned)	Autistic individual	36.1%	54.4%	8.9%	0.6%
	Family member	58.6%	37.4%	3.5%	0.5%
	Employer	47.6%	42.9%	9.5%	0.0%
	Service provider	48.1%	44.4%	7.4%	0.0%
	Researcher	41.3%	54.3%	4.3%	0.0%
The development of an individual support plan (i.e., provides clarity on the type, frequency, and duration of support required) assists in achieving successful work outcomes	Autistic individual	37.3%	55.0%	7.1%	0.6%
	Family member	51.0%	47.5%	1.0%	0.5%
	Employer	47.6%	38.1%	9.5%	4.8%
	Service provider	59.3%	38.9%	1.9%	0.0%
	Researcher	54.3%	45.7%	0.0%	0.0%
A readily available support from an employment coordinator is essential to help with difficult work situations	Autistic individual	36.1%	43.8%	17.2%	3.0%
	Family member	52.3%	42.6%	4.6%	0.5%
	Employer	52.4%	33.3%	9.5%	4.8%
	Service provider	51.9%	40.7%	7.4%	0.0%
	Researcher	45.7%	47.8%	6.5%	0.0%
On the job training helps with understanding the workplace rules (e.g., start times, finish times, break times, sick leave, holiday leave, and emergencies evacuation procedures)	Autistic individual	53.4%	39.2%	6.0%	1.3%
	Family member	<b>71.7%</b>	<b>26.9%</b>	0.9%	0.5%
	Employer	57.1%	37.1%	2.9%	2.9%
	Service provider	58.1%	34.2%	6.0%	1.7%
	Researcher	<b>65.9%</b>	<b>34.1%</b>	0.0%	0.0%
Financial assistance from an Employment Assistance Fund is helpful in allowing workplaces to make workplace adjustments for employees	Autistic individual	38.8%	47.0%	11.6%	2.6%
	Family member	38.7%	53.5%	7.4%	0.5%
	Employer	37.1%	42.9%	14.3%	5.7%
	Service provider	42.2%	44.0%	12.1%	1.7%
	Researcher	36.6%	61.0%	2.4%	0.0%
Assistance from an employment coordinator is necessary when applying for funding for workplace adjustments	Autistic individual	23.0%	52.7%	21.8%	2.4%
	Family member	27.6%	57.8%	14.1%	0.5%
	Employer	10.0%	55.0%	25.0%	10.0%
	Service provider	38.5%	48.1%	13.5%	0.0%
	Researcher	17.5%	67.5%	15.0%	0.0%
Businesses value a broad range of skills in their employees (e.g., communication, problem solving, learning, technology)	Autistic individual	48.5%	36.1%	10.3%	5.2%
	Family member	42.0%	47.5%	8.2%	2.3%
	Employer	28.6%	62.9%	5.7%	2.9%
	Service provider	31.6%	52.1%	14.5%	1.7%
	Researcher	40.9%	52.3%	6.8%	0.0%
Workplace mentors can assist with daily work issues	Autistic individual	41.6%	50.2%	7.4%	0.9%
	Family member	47.5%	51.6%	0.5%	0.5%
	Employer	40.0%	57.1%	2.9%	0.0%
	Service provider	59.8%	39.3%	0.9%	0.0%
	Researcher	43.2%	56.8%	0.0%	0.0%
It is OK to choose to be alone during the lunchbreak	Autistic individual	<b>76.2%</b>	<b>19.1%</b>	3.4%	1.3%
	Family member	55.5%	39.5%	4.5%	0.5%
	Employer	45.7%	54.3%	0.0%	0.0%
	Service provider	60.7%	32.5%	6.8%	0.0%
	Researcher	<b>73.3%</b>	<b>24.4%</b>	2.2%	0.0%

<sup>a</sup>Indicates statements where reverse scoring for Swedish participants was used.

except researchers had high disagreement ratings for “It does not matter that employees are motivated by their work.” Autistic individuals, employers and service providers had high disagreement ratings for “Reporting to several different managers, rather than one main manager for work is preferable.” Families had high disagreement ratings for “Ongoing support from an employment coordinator limits work performance.” Autistic individuals and researchers had high disagreement ratings for “A support plan for work should only be agreed upon by the employer, not the employee, employment coordinator or any colleagues or managers involved.” Researchers also had high disagreement ratings for “Short, regular breaks during the day interrupt concentration.”

## Discussion

This study presents the largest and most comprehensive international survey involving multi-informant groups of the facilitators and barriers influencing employment outcomes for autistic individuals to date. Significant disparity between key stakeholder groups internationally was observed, highlighting the necessity of capturing multiple viewpoints from a variety of perspectives. Findings present significant implications for supporting autistic individuals in the workplace.

Discrepancies between key stakeholders regarding the perception of facilitators and barriers to employment were evident across all employment stages, possibly arising from divergent lived experiences, and understanding of ASD. This disparity between key stakeholder perceptions of the facilitators and barriers to employment may compound the difficulties faced by autistic individuals in the workplace. For example, communication difficulties were perceived to be the most challenging barrier to maintaining employment for all key stakeholders except employers, with employers, in fact, reporting communication to be the least challenging factor. It is possible that these differences may reflect a lack of recognition or knowledge of the communication difficulties autistic individuals’ face in the workplace, potentially contributing to their needs not being adequately met. Importantly, the apparent disparity between key stakeholder groups, particularly between autistic adults and other key stakeholders, highlights the critical need to take into account the voices and experiences of autistic individuals themselves when developing priorities, strategies and interventions. Though other key stakeholder groups were not examined, differences between the perceptions of autistic adults and employers on the factors influencing successful employment have been identified previously [Scott et al., 2015]. In agreement with this previous research, providing avenues to increase communication between all key stakeholders, and

facilitating the identification and communication of individual needs in the workplace may contribute to a greater understanding of an individual’s strengths and difficulties, contributing to improved employment outcomes [Scott et al., 2015].

Ensuring appropriate accommodations for autistic individuals are made, however, requires employer knowledge of the ASD [Santuzzi, Waltz, Finkelstein, & Rupp, 2014]. It was found that while employers perceived this to be important for ensuring employment success, the same perception was not held by autistic individuals. Stigma and a lack of understanding of ASD in the workplace may contribute to autistic individuals being hesitant to disclose a diagnosis [Santuzzi et al., 2014]. In fact, autistic adults identified stigma as the most challenging issue facing autistic individuals in gaining employment. Stigma or misunderstanding related to ASD and other disabilities is commonly identified in the employment literature as having a significant influence on an individual’s success in employment [Johnson & Joshi, 2016; Nesbitt, 2000; Richards, 2012; Vornholt, Uitdewilligen, & Nijhuis, 2013]. Taken together, findings emphasize the need to address environmental factors, such as attitudes surrounding ASD. In regard to employment, improving understanding and acceptance of ASD and reducing stigma in the workplace will facilitate open and honest communication, and approaches that support autistic individuals should they choose to disclose [Johnson & Joshi, 2014].

It is perhaps interesting to note that key stakeholders rated providing training to employers about ASD, and making the workplace more accessible as less important in facilitating employment success. These findings may appear at odds with previous research that identified the provision of employer training and implementing environmental supports as important to facilitating success [Scott, Falkmer, Falkmer, & Girdler, 2018]. However, it is possible that these factors remain important but were perhaps not prioritized as strongly as other items, and in fact, a majority of key stakeholders still rated these factors as important for success. Another potential interpretation is that respondents may have interpreted “training employers about ASD” as something generic and not tailored to individual functioning. How ASD manifests can be extremely diverse, therefore an individualized approach is important to consider when employing autistic individuals [Black et al., 2019]. While to date, some research has focused on the autistic individual, and the employer, future interventions seeking to improve employment outcomes for autistic individuals may benefit from taking a more holistic approach to employment for autistic individuals [Scott, Milbourn, et al., 2018].

One such holistic framework is the ICF [World Health Organization, 2002]. The ICF may provide a standardized means to assist in the identification and communication

of an individual's unique strengths and difficulties profile, enabling the development of a shared understanding between key stakeholders. Core-sets developed to improve the usability of the ICF to assess functioning in specific conditions have been developed for ASD [Bölte et al., 2019]. The ICF ASD Core-sets captures a high percentage of ICF categories related to activities and participation (54%) and environmental factors (28%), highlighting the significant role that contextual factors have on functioning for autistic individuals. Importantly, using this framework, disability is considered the result of the interaction between an individual and their environment [Bölte et al., 2019; World Health Organization, 2002]. Based on this conceptualization, occupational disability cannot be fully attributed to an individual's impairments, but is also result of the absence of environmental supports, emphasizing the responsibility of the environment in ensuring that all individuals have equal access to employment [Black et al., 2019]. For these reasons, the ICF ASD Core-sets may provide a useful framework in developing a standardized measure to assess the functioning of autistic individuals in employment and facilitate communication between key stakeholders [Bölte et al., 2019].

Despite several areas of discrepancy across key stakeholder groups, areas of consensus emerged. All key stakeholders endorsed matching skills, abilities, and interests to the job criteria and focusing on strengths in the workplace as key in facilitating success when preparing for and maintaining long term employment. These findings concur with previous findings supporting the need for strengths-based approaches in ASD [Jones et al., 2018]. Similar to previous research [de Schipper et al., 2016; Kirchner et al., 2016; Scott, Milbourn, et al., 2018] all key stakeholders generally had similar levels of agreement regarding ASD-related strengths. However, autistic individuals tended to report significantly lower agreement compared to other key stakeholder groups. Autistic individuals may have difficulty recognizing their strengths in the workplace and may require support in identifying and communicating their strengths to others.

Work experience and learning the skills required for work were identified as key to ensuring employment success for autistic individuals and were generally rated as important by stakeholders. Providing work experience may enable autistic individuals to prepare for the workplace and to better identify their strengths and needs in employment [Lee, Black, Tan, Falkmer, & Girdler, 2019]. Engaging in early work experience opportunities has been shown to significantly improve employment outcomes for autistic youth [Siperstein, Heyman, & Stokes, 2014; Wehman et al., 2014], thus providing additional opportunities for autistic youth to engage with early work experience may support employment outcomes in adulthood.

While drawing conclusions based on this cross-cultural exploration is limited by the significant variability across samples, the analysis suggests that key stakeholder perspectives vary significantly based on the cultural and political environment. It is likely that these differences may result from the different social and work policies and structures employed in the countries examined. While the United States Department of Labor, Office of Disability Employment Policy, a nonregulatory federal agency seeks to influence policy and support those with disabilities, such as autistic individuals in employment [U.S Department of Labor, 2018], the United States largely operates in the private sector. In comparison, Sweden is more centralized, providing a number of government-run initiatives to support employment [Swedish Public Employment Service [Arbetsförmedlingen], 2012], with Australia providing a combination of privatized and centralized services. Key stakeholders in Sweden tended to rate both facilitators and barriers as more important or challenging than those in Australia and the United States. While speculative, it is possible that these differences in ratings may have arisen from a greater understanding of the strengths and difficulties faced by autistic individuals in regard to employment, and may be reflective of the social structures and policies in place to support autistic individuals. Perhaps of particular interest is that autistic individuals in the United States were significantly less likely to perceive disclosure of diagnosis to employers as important when compared to autistic adults in Sweden and Australia, perhaps resultant of the different structures in place to support autistic individuals across countries. These findings demonstrate the significant influence government policy may have on the employment outcomes for autistic individuals, and on those with other disabilities. In line with the original mandate of this study, findings may have significant implications for the development of future policies to promote inclusion of autistic individuals in employment.

Collectively, results highlight that employment for autistic individuals is a complex concept, with perspectives varying across both key stakeholder groups and countries. Given these varying perspectives, future research seeking to improve employment outcomes for autistic individuals should consider differing key stakeholder perspectives on the facilitators and barriers to employment for autistic individuals and should seek to capture these multiple perspectives. Interventions developing skills in autistic job seekers, their employers and employment support organizations, and simultaneously addressing environmental issues across all stages of employment, combined with a holistic framework, such as the ICF [World Health Organization, 2002], to identify individual strengths and limitations, may be beneficial.

Findings of this study must be interpreted with the following limitations in mind. Firstly, as no valid and

reliable survey for this topic exists, the surveys employed in the current study was developed by the research team. Limitations therefore exist in regard to the psychometric properties of the surveys. The surveys were, however, developed in collaboration with various ASD associations and experts, and were informed by the two preceding studies in this series. The results underpinned by this survey must be interpreted with caution and cannot be generalized to the viewpoints and experiences of *all* autistic individuals and key stakeholders. Secondly, there was significant variability in sample composition across countries, and it is generally difficult to reach a balanced sample across different respondent groups. It is likely that some key stakeholders sought may not have had confirmed knowledge of the diagnosis of their employees or clients. Not all individuals disclose their diagnosis to their colleagues or employers. Service providers, particularly in Sweden, may also work within a “functioning-oriented paradigm” as opposed to “diagnostic-based paradigm,” making it difficult to match service providers to autistic clients. Thirdly, some sample sizes were relatively small after dividing across countries (for example employers), potentially limiting reliability of the statistical analysis. Finally, while basic demographic data were collected, future research may benefit from exploring how specific demographic factors may influence employment outcomes for autistic individuals, factors such as race/ethnicity or gender identity, and how they may shape individual experiences and perceptions of employment. As a result of these limitations, comparability across samples is limited, contributing to difficulties interpreting findings of this study.

## Conclusion

Perceptions of the barriers and facilitators to employment for autistic individuals vary across both key stakeholder groups and across countries, highlighting the need for future research to consider the perspectives of all key stakeholders involved in the employment of autistic individuals. Using a holistic approach to employment, which facilitates an inclusive work environment, builds open and honest communication channels between employers, autistic individuals, and other key stakeholders. Focusing on strengths and providing early work experience are recommended to improve employment outcomes for autistic individuals.

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## Conflict of Interest

All authors declare no conflict of interest. Sven Bölte declares no direct conflict of interest related to this article. Bölte discloses that he has in the last 5 years acted as an author, consultant, or lecturer for Shire, Medice, Roche, Eli Lilly, Prima Psychiatry, GLGroup, System Analytic, Kompetento, Expo Medica, and Prophase. He receives royalties for text books and diagnostic tools from Huber/Hogrefe, Kohlhammer, and UTB.

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## Supporting Information

Additional supporting information may be found online in the Supporting Information section at the end of the article.

**Appendix A** – Survey Questions used and variations across countries