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The Cooperative Research Centre for Living with Autism (Autism CRC)

The Cooperative Research Centre for Living with Autism (Autism CRC) is the world's first national, cooperative research effort focused on autism. Taking a whole-of-life approach to autism focusing on diagnosis, education and adult life, Autism CRC researchers are working with end-users to provide evidence-based outcomes which can be translated into practical solutions for governments, service providers, education and health professionals, families and people on the autism spectrum.

autismcrc.com.au

A note on terminology

We recognise that when referring to individuals on the autism spectrum, there is no one term that suits all people. In our published material and other work, when speaking of adults we use the terms 'autistic person', 'person on the autism spectrum' or 'person on the spectrum'. The term 'autistic person' uses identity first language, which reflects the belief that being autistic is a core part of a person's identity.

Autism Spectrum Disorder (ASD) is diagnostic terminology used by the healthcare sector, and is used in the context of a person being 'diagnosed with Autism Spectrum Disorder.'

1. Overview of Global Study Methodology

1.1 Study Design and Administration

We first conducted a mixed methods systematic literature review from which we identified the relevant factors to autism employment and what we needed to understand better to advance research and practice in the field. This led us to focus on how factors such as the physical environment (including accommodations made), workplace design, and organisational processes influenced the experiences of autistic individuals and their workplace peers. To measure these factors, we used existing validated scales where possible and developed new ones where validated scales were not available. We developed five unique surveys for different respondent groups to create a 360° perspective of the inner workings of organisations that have committed to employing autistic people. The five respondent groups were: autistic employees, co-workers, supervisor(s), human resource (HR) managers, and where applicable the autism employment program director/executive. As part of finalising the survey instrument, we piloted the survey with testers from the various respondent groups.

We identified eligible organisations mainly through specific autism employment focused conferences and research centres including the Autism CRC as well as groups and networks within the autism employment space. We supplemented these sources with publicly accessible sources such as websites and news articles that named companies offering competitive employment to autistic individuals. We contacted potentially eligible institutions with an explanatory introduction of the study, its aims, other participating and sponsored organisations involved, and an invitation to participate. Further, we informed organisations that the study had ethical clearance from Macquarie University's Human Research Ethics Committee which was available upon request. We did not collect uniquely identifiable information such as respondents' names or phone number and we coded and aggregated all statistical and background information to ensure anonymity of participants. Prior to data analysis, the collected data underwent a meticulous cleaning process to ensure no data entry errors or biases were present and to ensure confidence in the results of the analyses undertaken.

2. Overview of Global Survey Respondents

2.1 Demographics of 169 Survey Respondents

2.1.1 All Five Respondent Groups

Figure 1: Sample Distribution of Respondent Groups

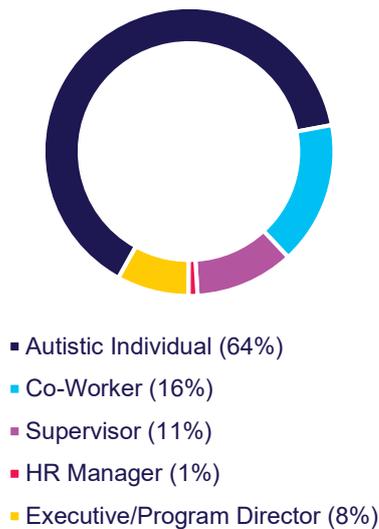


Table 1: Distribution of Age for all Respondent Groups

Age 5 Year Bands	N	%
20-24	12	7.1%
25-29	31	18.3%
30-34	28	16.6%
35-39	15	8.9%
40-44	22	13.0%
45-49	21	12.4%
50-54	15	8.9%
55-59	9	5.3%
60-64	6	3.6%
65-69	5	3.0%

Table 2: Diagnoses Per Respondent Group

Below is a table indicating the proportion of respondents reporting each condition.

Condition	Autistic Individual	Co-Worker	Supervisor	HR Manager	Executive/Program Director
ADHD	13%	--	5%	--	--
Anxiety	15%	7%	10%	--	--
Autism	100%	4%	5%	--	--
Bipolar	2%	--	--	--	--
Depression	17%	4%	5%	50%	15%
OCD	5%	--	--	--	--
PTSD	5%	46%	24%	50%	8%
Something Else	5%	7%	--	--	--
No Conditions	3%	25%	52%	--	77%

2.1.2 Autistic Respondents

Reflecting the historical recency of autism being recognised and diagnosed by the medical profession, younger workers in our sample were diagnosed much earlier in their life than older workers. Interesting is the distribution of employment and employer type per country in our sample with autistic employees being in full-time ongoing employment in North America more often than in other locations. Australia (and New Zealand) showed the highest number of fixed-term employment (full-time and part-time) as well as part-time ongoing employment. Whether this reflects a general pattern of autism employment or a characteristic of our sample remains a question for future research.

2.2 Demographics of 33 Organisations Participating in Study

In total, 33 organisations comprised of for-profit organisations, social enterprises, not-for-profits, and government agencies agreed to participate. Aggregated analysis of participants highlights a diverse, cross-cultural response stemming from geographical regions spread across five continents: Asia (India, Israel), Oceania (Australia, New Zealand), Europe (Germany, Netherlands, Belgium), North America (United States, Canada, Mexico), and South America (Colombia, Argentina). When interpreting the results below, it is important to note the organisations in our sample were not equally distributed across countries. Most government and non-profit organisations were in Australia and New Zealand whereas most social enterprises were in the USA and Canada.

3. New Insights Revealed by Global Survey and Their Research, Practice and Policy Implications

A plethora of novel insights on autism employment emerged from our global study. We summarise these next including highlighting some of their important implications for new avenues of research.

Before discussing the variety of novel and important findings of our global study, we would like to note that employment and employer type are not equally distributed per country in our sample. Whether this reflects a general pattern of autism employment or a characteristic of our sample remains a question for future research. In our sample autistic employees work in full-time ongoing employment in North America more often than in other locations. Australia (and New Zealand) show(s) the highest number of fixed-term employment (full-time and part-time) as well as part-time ongoing employment. When interpreting this finding it is important to note that this distribution in

our sample might produce a confounding effect on other results such as employer type. As we found several significant differences between employees in those countries and employer types future research is needed to further unpack those findings.

3.1 Comparing autistic employees to non-autistic workers

When comparing autistic employees to their colleagues our first interesting finding is that, while autistic employee showed more and a larger variety of co-occurring diagnosed conditions, non-autistic respondents such as co-workers, supervisors and HR managers reported relatively higher proportions of conditions such as depression and PTSD than autistic respondents. This finding highlights the need for future research to unpack the complexities of employees with various conditions working together in organisations. In particular, it will be important to better understand how (co-occurring) conditions affect the workplace accommodations and relationships between autistic employee and their buddies/mentor and their direct supervisor. Confirming existing practices is our finding that a buddy or mentor is useful to both disclosed and undisclosed autistic workers. Importantly, our findings indicate that having a buddy or mentor is even more important for autistic workers who are undisclosed to their employer, suggesting all organisations should have in place this practice and make it available to all workers who wish it. Furthermore, our findings suggest that adjustment requests and provisions mostly come from both autistic and non-autistic workers, not just autistic workers. The largest discrepancies between requested and provided adjustments for autistic employees were in customised job design, job coach and autonomy to schedule work. The only adjustment requested by a greater percentage of autistic workers than non-autistic workers was having a job coach whereas the only adjustment requested by a greater percentage of non-autistic than autistic workers was autonomy to decide how they carry out work. Autonomy to decide how to carry out work and instructions in writing were reported to be provided more often than autistic employees request them. Thus, in designing an effective buddy system as well as other workplace adjustments, a better understanding of the role diagnosed conditions of all employees in workplace and on workplace relationships will be important.

Encouragingly, autistic workers had similar satisfaction levels to their co-workers with their work environment feature and organisation's practices, with the only statistically significant difference being that autistic workers were more satisfied than their co-workers with their relationship with their direct supervisor. Connecting to the above issue of co-occurring diagnoses, a better understanding of how co-occurring conditions of autistic employees and conditions of their direct supervisor affect their work relationship, Autistic workers also felt similarly secure on various employment-related matters. Future research is needed to corroborate this finding.

Encouragingly, co-worker responses' as to what they perceive catered to inclusion and exclusion of autistic employees had a high degree of overlap with the results from autistic individuals. For example, both groups reported social engagement (talk to me like would with anyone else, make social chit chat) and aiding when feeling overwhelmed (help when getting stressed, showing an interest to understand autism) as contributing to inclusion. Previous research indicates that the cohort most influential in making workers feel included or excluded is not supervisors/managers but rather colleagues (Fujimoto et al., 2014; Krzeminska et al., 2019; Ochs et al., 2002). This is because workplace colleagues generally tend to more frequently communicate and interact with workers than do their managers and/or executives. Whether, and under what (diagnosed) conditions, this is also the case for autistic workers is an important question for future research.

3.2 Individual and contextual factors matter

Our global survey also revealed several individual (gender, disclosed/non-disclosed, level of diagnosis), as well as contextual (employment and employer type, country) factors that were related to autistic workers' perceived helpfulness of adjustments and organisational practices, workplace satisfaction, employment-related security, and inclusion. Without repeating the nuanced and complex findings which all point towards interesting future research needs, it seems that by and large autistic employees reported higher levels of satisfaction when they are female or are disclosed or have no primary care giving responsibilities or work full time or the less support they require or work in a social enterprise or for-profit organisation and not in Australia/New Zealand. In the light of this, we would like to discuss two pressing issue that result from this study. First, a particularly pressing issue for our local context is the result that autistic employees in Australia and New Zealand had the lowest mean satisfaction with their work environment feature and organisational practices compared to other countries. Urgent research is needed to unpack whether these findings are related to the employment (government and non-profit) and/or employer type (fixed-term) that is represented proportionally higher in the Australian part of our sample or is due to other factors.

Second, future autism employment research must account for intersectionality including gender, and other factors which were outside of the scope of this study but have been shown to be important for previous inclusion research such as ethnicity if we are serious about advancing our knowledge in this space. For example, our global survey revealed that the top three helpful recruitment practices as perceived by autistic workers are: an individual interview (e.g., panel of people and just you - and maybe a support person), a task instead of a formal interview (e.g., code a program, make/design something), and communicated that the job you applied for was designed for autistic employees. This first finding is interesting in light of widely held assumptions that

interviews are an unsuitable recruitment practice for autistic individuals. A possible explanation for our findings can be found in gender differences. Among other recruitment practices, female autistic employees reported having an individual interview as more helpful than male autistic employees: Thus, what may have created previously held assumptions about the ineffectiveness of interviews as recruitment practice for autistic workers may have been a focus on autistic males whose preferences seem to differ from autistic females. Adding further nuance to the question regarding helpfulness of interviews, our findings show that autistic employees in social enterprises rated individual interviews among other recruitment practices as more helpful than employees in other types of organisation. Group interviews, however, seem to be perceived as more helpful by autistic employees in for-profit organisations. A possible explanation is that some for-profit organisations such as large MNCs have developed sophisticated recruitment procedures tailored to autistic job candidates that involve group interviews. Given our results, however, the preference of those over individual interviews for female job candidates may be unwarranted. Thus, to design effective workplace practices, employers need to understand the most effective practice for different subgroups of autistic job candidates (e.g., female vs male) and their organisation type.

3.3 Other new insights and implications for future research

A new insight from our global survey was the helpfulness to autistic individuals of working in a clean environment. Historically, the focus of the physical environment in the context of work and education typically centred on ergonomic design for comfort, auditory (e.g., sounds, music) and visual components (e.g., lights). Moreover, future research is needed to understand how a clean environment helps autistic individuals. For example, is it because an organised environment establishes a degree of familiarity as to where items are located and of the overall workplace itself. Another intriguing finding warranting further investigation is that autistic workers' satisfaction with work environment features (e.g., lights, noise, smell, clutter, colours, patterns, etc.) decreases as their job tenure increases.

Our global survey also revealed that autistic workers' satisfaction with their work environment feature is lower for employees with longer tenure, with 44.4% of those with tenure > 5 years expressing satisfaction, whereas 86% and 87.9% of autistic employees with ≤2 years and 2-5 years tenure, respectively, expressing satisfaction. This pattern warrants future research as it may indicate organisations should give more attention to environmental factors when they first hire autistic individuals becoming laxer over time.

Reflecting the historical recency of autism being recognised and diagnosed by the medical profession, younger workers in our sample were diagnosed much earlier in their life than older

workers. Thus, another potential explanation for the lower satisfaction for employees with longer tenure is that those may be older employees who may have entered the workforce either without a diagnosis or with having received a diagnosis later in life and thus may face different workplace conditions than their younger colleagues who have entered into workplace situation with higher levels of awareness about autism employment issues. What we need to know is whether and if so what are different organisational practices warranted for autistic workers diagnosed as children versus as adults?

Another important area of insight come from areas where discrepancies in autistic and co-workers' perceptions of the usefulness of adjustments arise. In contrast to existing assumptions, fewer autistic compared to non-autistic workers reported as helpful having a job with few tasks or where tasks are similar. Significantly more helpful to autistic than non-autistic workers were tasks that have an obvious beginning and end, work activities that have direct and clear information about their performance was offered, a job requiring doing only one task at a time. More research into the different job designs preferred by different subgroups of autistic employees as well as into how to best create awareness about those without confusing co-workers and supervisors is needed.

4. New Insights Revealed by Global Survey and Their Research, Practice and Policy Implications

In closing, we wish to point out that due to the willingness of our participating organisations and respondents to openly share their experiences, practices, and perceptions, which also represented a significant time commitment on their part, we were able to successfully gather a robust and remarkable global dataset from which emerged numerous significant new insights about autism employment. Our point is first to show our gratitude for our participants' generosity and, second, to highlight that, as for as many doors that graciously opened to grant us the data access required to significantly advance knowledge and practice in the area, just as many employing organisations and colleagues and managers of autistic workers chose to keep their doors shut. The extreme difficulty in obtaining data on autism employment practices and experiences stands in the way of progress toward solving the grand challenge of autism unemployment. Thus, we urge policymakers to look at ways to incentivise employers to participate in autism employment research and call for research to better understand why those employers of autistic workers that decline to contribute to research efforts in the area do so. Notwithstanding this important issue, the findings that emerged from our global study provide immediately useful new knowledge on effective autism employment practices and lay the foundation for multiple lines of new research inquiry.



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Our values



Inclusion

Working together with those with the lived experience of autism in all we do



Innovation

New solutions for long term challenges



Independence

Guided by evidence based research, integrity and peer review



Cooperation

Bringing benefits to our partners; capturing opportunities they cannot capture alone



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