

The value of employment support services for adults on the autism spectrum and/or with intellectual disabilities: Employee, employer, and job coach perspectives

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Abstract.

BACKGROUND: Employment rates among individuals on the autism spectrum or with intellectual disabilities (ID) remain extremely low. Although job coaching services have contributed to successful employment for these individuals, few studies have examined the importance of such support, and even fewer have explored which services are valued most by stakeholders.

OBJECTIVE: We examined the importance of employment support services through employee, employer, and job coach perspectives, and employee and employer satisfaction of job coach support.

METHODS: A multiple-case study was designed with a community organization providing employment support to individuals on the autism spectrum or with ID, and their employers. Nine employee-employer-job coach triads evaluated the importance of specific services and rated their satisfaction with the job coach support.

RESULTS: Services were rated as important, however, some discrepancies were observed between the groups in their ratings of services (e.g., soliciting regular feedback about the

employee's performance). Satisfaction was high for employees and employers; both groups indicated that they would recommend these services.

CONCLUSIONS: Job coach support was highly valued by all groups, underscoring the need for these services to be widely available, and suggesting that this support may serve as a critical factor in improving employment outcomes among this population.

Keywords: Autism spectrum, intellectual disabilities, employment, job coach support

1. Introduction

Obtaining and maintaining employment is an integral part of adulthood (Anderson et al., 2016), as it provides an opportunity for financial autonomy and promotes quality of life (Ellenkamp et al., 2016). Individuals on the autism spectrum¹ or with intellectual disabilities (ID) are confronted with major challenges including difficulties with social and communication skills, social problem-solving and mental health issues (Marriage et al., 2009). As a result, many of these individuals experience higher levels of social isolation and bullying, smaller social networks and low levels of independence (Neary et al., 2015; Wallace et al., 2016). Employment may therefore play an even more pivotal role in the lives of these individuals (Lysaght et al., 2012), as it promotes social integration, independence, a sense of purpose, and increased self-esteem (Dudley et al., 2015). The benefits of employment among individuals on the autism spectrum or with ID also extend to their families, the community and the government (Dudley et al., 2015).

Despite the benefits of being employed, individuals on the autism spectrum or with ID continue to face barriers to employment and are underrepresented in the workforce. An employment rate of 32% is reported for adults on the autism spectrum in the UK (National Autistic Society, 2016) and of 14% in the United States (Roux et al., 2017). In Canada, the 2012 Survey on Disability reported the employment rate of adults with a developmental disability (22%; 14% for adults on the autism spectrum) was less than a third of the rate for those without disabilities (74%), and lower than any other disability group (Turcotte, 2014; Zwicker et al.,

¹ “On the autism spectrum” is used throughout this paper in accordance with recommendations to remove ableist language from autism research (Bottema-Beutel et al., 2020).

2017). These findings were later reflected in a study conducted by the Institute for Research on Public Policy, in which employment rates for individuals with ID and developmental disabilities in Canada were 25%, the lowest of all disability groups (Prince, 2016). Although governments around the world have passed legislation to ensure inclusive workplaces, there remains a significant gap between the employment rates of those with and without disabilities (Ellenkamp et al., 2016). An important question to address, then, is what factors can help societies move toward their goal of more inclusive, barrier-free workplaces for individuals on the autism spectrum or with ID?

One promising solution comes in the form of individualized counselling and support for job seekers and employers. Job coaching services (job search and retention support) may offer a bridge to employment for individuals with disabilities. Studies examining job coach support highlight its effective way of integrating individuals with disabilities into the workplace and helping them maintain their job through ongoing support and training (for review, see Ellenkamp et al., 2016). Studies have also found that individuals on the autism spectrum or those with ID are more likely to obtain competitive employment when they receive employment support services (Lawer et al., 2009; Moore et al., 2004). Employers identify job coaches as a facilitating factor in the hiring of an individual with ID (Morgan & Alexander, 2005; Tse, 1993). Ward et al. (1993) found that job coaches accurately reflected employers' values about which factors were important for the integration of an individual with a developmental disability into the workplace. In their study, no significant differences were found between employers of individuals with disabilities and job coaches in their ratings of importance of services provided by job coaches. Another study compared the perspectives of employees on the autism spectrum and employers and found that, while both

groups viewed support in the workplace as important, they differed in their perspectives about the best work environment and support levels, as well as about job and productivity expectations (Scott et al., 2015). Without a job coach to act as an intermediate between both individuals, such differences may contribute to miscommunication and difficulties in maintaining employment, which could result in poor work evaluations and job loss (Müller et al., 2003). Although these studies point to job coach support as a promising approach to assisting individuals on the autism spectrum or with ID in gaining and maintaining employment, more evidence from different jurisdictions is needed (Black et al., 2020); in practical terms, this evidence can be used to advocate for local government investment in job support services.

Individualized counselling and support services are one component of an “ecosystem approach” to sustained, positive employment outcomes and social inclusion for people on the autism spectrum (Nicholas et al., 2018). This approach views one’s employment situation at the intersection of components involving multiple players (e.g., a person on the autism spectrum, their job coach, employer and coworkers, as well as family and community members) and services informed by societal values and policies (e.g., employment support agencies, social services in the community, workplace policies and environment). Therefore, we explore three intersecting components of this ecosystem: the perspectives of real-life employee, employer, and job coach triads, who are jointly implicated in successful job maintenance, on the value of job coach support. Such a multi-party analysis is fundamental to understanding whether job coach supports are valuable to key stakeholders, and how their perspectives may converge or disagree, which would provide important insights to deliver optimal job support services in the future.

1.1. The current study

This research was conducted as part of a larger study co-created in partnership with Action main d'oeuvre (AMO), a community organization located in the Greater Montreal Area providing individualized job coaching services for individuals on the autism spectrum or with ID, and their employers. The organization wanted to systematically gather feedback from their clients (i.e., job seekers and employers) to identify how to improve and understand the impact of their services. In this article, we focus specifically on (1) the perceived importance of specific job coaching services through employee, employer and job coach perspectives; and (2) employee and employer satisfaction with the job coach support services received. The research team co-created a multiple-case study (Yin, 2012) with the organization, in which triads of employees, employers and job coaches participated. Triads completed an evaluation on the importance of specific services provided by job coaches, as a way to assess the importance of job coach support and to determine which services are valued most by stakeholder groups. Employees and employers rated their satisfaction with the job coach support services provided by AMO to determine whether these groups benefit from this support and to evaluate whether these services are meeting stakeholder needs.

This is the first study to incorporate the perspectives of stakeholders working together, rather than participants from more than one stakeholder group who do not know one another (e.g., Scott et al., 2015). Through examining the perspectives of individuals who are working together, it is possible to determine whether all members benefit from the job coach support and whether members converge in their ratings of importance of the types of support received, or, for example, if different stakeholders may have contrasting views on some services, which could suggest modifying the way support is provided. The information gained through this study will

be useful for improving service provision to better meet the needs of employees and employers working with job coaches, which would, in turn, create more inclusive workplaces and facilitate the pathway to employment for a population that continues to encounter many barriers.

2. Methods

2.1. Participants

Nine employee-employer-job coach triads were recruited. Two employees had the same employer, and another two employees had the same job coach. Employees ranged in age from 27 to 48 years, with an average age of 37 years. Six employees were diagnosed as being on the autism spectrum (without co-occurring ID), one was on the autism spectrum with co-occurring ID, and two had ID. Other general information about employees can be found in Table 1. Employers represented a variety of businesses, including maintenance, landscaping, food service, and the public sector. Job coaches working at AMO invited all of their clients who were either in the process of starting a new job or experiencing a change in employment that required their services, to participate in this study.

Flyers stating the purpose of the study and what participation entailed were shared by job coaches with their clients who were potential candidates. To participate, the employee had to give us permission to contact their employer, and both individuals had to provide their written informed consent. Triads participated in the study at two different timepoints: (1) within the first four weeks of the employee's start date or date of significant change in employment; and (2) three to four months later. Employees and employers were each compensated for their participation with fifty dollars upon completion of the second visit. Ethical approval for this study was obtained from an Institutional Review Board and written consent was obtained from participants.

2.2. Measures

Evaluation of the importance of specific job coaching services. Job coaches provided two types of services: (1) job search services; and (2) job retention services. At the first timepoint, employees and job coaches rated the importance of each service job coaches provided to the individual when searching for a job (see Table 2 for a complete list of job search services). Given employers are not involved in this part of the process, they did not complete an evaluation for these services. At the second timepoint, employees, employers, and job coaches rated the importance of each service job coaches provided to the employee when integrating the individual into their new workplace (i.e., job retention services; see Table 3 for a complete list of job retention services). Each rating of importance was on a 5-point scale, ranging from 1 (not at all important) to 5 (very important). The evaluation of job retention services was based on Ward et al. (1993); services were identified by expert job coaches (with at least 2 years of experience) on the basis of their professional activities. These services were confirmed and validated by the job coaches in this study, and the evaluation was then modified to include job search services. In addition to rating the importance of services, job coaches were asked to put forth employer characteristics they believed to be supportive of job maintenance.

Satisfaction with job coach support. At the second timepoint, employees and employers were administered a questionnaire assessing their overall satisfaction with the job coach support that they received. The employee and employer version assessed satisfaction with the job coach support using a scale of 1 (very dissatisfied) to 5 (very satisfied). The employer version included an additional 2 questions assessing their ability to achieve the same outcomes without a job coach using a scale of 1 (not at all) to 5 (absolutely). Both groups were asked whether they would recommend these services. The questionnaires were developed based on

knowledge gained from previous evaluations of successful support programs (Hillier et al., 2007) and used in a previous evaluation of services (Martin & Lanovaz, 2021).

2.3. Procedure

Job coaches working at AMO invited their clients to participate with their employer if they were either about to start a new job or were experiencing a change in their current employment situation. Clients were informed that participation was voluntary, and that their support services would not be affected. If a client expressed interest in participating and gave permission for the research team to contact them and their employer, their job coach provided the researcher with the client's contact information. If the client agreed to participate, an in-person meeting between the client and researcher was scheduled, either in a quiet office at AMO or at the client's workplace. At this first timepoint, the researcher introduced himself, explained the purpose and duration of the study, as well as the fact that all information would be kept confidential, and obtained informed written consent. The researcher built rapport through conversation and then introduced two questionnaires to be completed: 1) on the importance of job search services received from their job coaches prior to job placement (e.g., during the orientation and job search process), and 2) on their satisfaction with their job (not reported here). The researcher explained how to complete the questionnaires and then checked in periodically to ensure the participant understood the different items, providing clarification if needed. Approximately three to four months later, the client was scheduled for a second in-person visit, where they completed three questionnaires: 1) on the importance of job retention services received from their job coach post job placement, 2) on their satisfaction with their job (not reported here), and 3) on their satisfaction with the job coach support received. Each visit lasted 30 to 45 minutes and participants received a gift card after completing the study.

Employers went through a similar procedure, completing an evaluation on the employee's performance at both timepoints (not reported here) and two additional questionnaires at the second timepoint assessing the importance of job retention services provided by the job coach and their satisfaction with the job coach support received. Data collection with the employers took place at their workplace or by phone if more convenient. Job coaches participated at the second timepoint only, where they completed ratings of the importance of specific job coach services, both before and post job placement, and an open-ended question about what employer characteristics they believe to best support job maintenance.

2.4. Data analysis

For each group, mean scores were calculated for every service evaluated. Services were ranked in descending order of importance based on employee mean scores. We report Cohen's *d* effect sizes to indicate the magnitude of differences between groups in their ratings of importance, as effect size is independent of sample size, which is particularly important for our study given the small number of triads. The benchmarks presented by Cohen (1988) for interpreting Cohen's *d* equate 0.2 to a small effect, 0.5 to a medium effect, and 0.8 and greater to a large effect. Given our modest sample size, differences in ratings of importance were only analyzed further if they were consistent across all groups. The employer characteristics put forth by job coaches were coded and categorized by theme. For employee and employer satisfaction ratings, descriptive statistics were used to analyze whether the parties involved were content with the services received.

3. Results

3.1. Perceived importance of specific job search services

Overall, ratings from employees and job coaches were 3.67 or higher on a 5-point scale (with 1 indicating not at all important and 5 indicating very important) for all job search services, demonstrating that both groups perceived these services to be highly important (see Table 2 for mean scores). The service rated the highest by employees was matching the job seeker with an employer who has already hired an individual with a disability ($M = 4.78$), whereas the highest rated service by job coaches was determining the job seeker's job skills ($M = 5$). There were three specific services where discrepancies with a large effect size between groups were detected. Job coaches rated the training of a job seeker on workplace skills (e.g., interpersonal skills) as more important than did employees ($d = .83$), whereas employees rated getting matched with an employer who has already employed someone with a disability ($d = 1.32$), and evaluating eligibility and applying for a provincial employer compensation grant ($d = 1.24$) as more important than did job coaches.

3.2. Perceived importance of specific job retention services

Employees, employers and job coaches assigned importance ratings of 3.33 or higher on a 5-point scale (with 1 indicating not at all important and 5 indicating very important) for all job retention services, showing that services received upon being hired are valued by the three groups (see Table 3 for mean scores). The service rated the highest by employees was providing immediate training on the job when deficiencies were observed during impromptu visits ($M = 4.33$), while the highest rated service by employers was impromptu visits or calls to the employee ($M = 4.11$). The services rated the highest by job coaches were to provide immediate training on the job when deficiencies were observed during impromptu visits, assist the employee in negotiating accommodations and adaptations to the job duties or work environment, assist in increasing the employee's speed and efficiency, and assist the employee's coworkers to

provide feedback, instructions, and/or friendship ($M = 4.67$). Three areas of discrepancy were detected, where both employee and employer ratings were lower than job coach ratings, with a large effect size difference between groups. Job coaches rated providing information about non-work issues that might affect job performance more important than did employees ($d = 1.09$) and employers ($d = 1.02$), assisting the employee in increasing their speed and efficiency as more important than employees ($d = 1.22$) and employers ($d = 1.15$), and lastly, assisting coworkers to provide feedback, instructions, and/or friendship, as more important than employees ($d = 1.05$) and employers ($d = .84$).

Finally, the eight job coaches who participated (ranging from 1.5 to 25 years of job coaching experience, mode years of experience = 5) put forth employer characteristics they believed to be supportive of job maintenance, which were categorized into eight themes (see Table 4).

3.3. Satisfaction with job coach support

When assessing satisfaction with the job coach support received, employees and employers were asked whether they would recommend these services, and employers were also asked to consider whether the same outcomes would have been achieved without the support of job coaches using a scale of 1 (not at all) to 5 (absolutely). Employees and employers were also asked to rate their satisfaction with the ongoing information, advice, assistance and support they were provided with throughout the process, using a scale of 1 (very dissatisfied) to 5 (very satisfied). Mean scores and percentages of employees and employers satisfied and dissatisfied with the job coach support are presented in Table 5. Note that Table 5 only lists percentages of those who responded “very satisfied” or “satisfied” (collapsed into satisfied) and “very dissatisfied” or “dissatisfied” (collapsed into dissatisfied) with the support they received.

Responses of “not dissatisfied nor satisfied” and “maybe” (equivalent to 3 on the scale) are treated as missing and not included in our results (Kaye et al., 2011). In our sample, 100% of employees and employers indicated that they would recommend these services to other individuals with disabilities searching for employment, and managers or organizations. In addition, over 50% of employers believed that they would not have hired the job seeker or been able to integrate the individual into the workplace without the ongoing support of a job coach. Only 11% of employers indicated that they would have been able to do so without such support. Lastly, 89% of employees and over 80% of employers indicated that they were either satisfied or very satisfied on every item rated for satisfaction, with one exception. Fifty percent of employers indicated that they were content with the information and advice given to their other employees, with only 17% feeling dissatisfied. However, it is worth noting that this 17% represents only one respondent.

4. Discussion

The current study is the first in the literature to explore the intersection of multiple perspectives of employees on the autism spectrum and/or with ID, employers, and job coaches engaged in the same employment experience. We examined the perceived importance of specific job coaching services to each of these three key groups, and employee and employer satisfaction with the job coach support services received by a community organization located in the Greater Montreal, Canada area. Our findings demonstrate that all three groups produced high ratings of importance across job search and job retention services. Though our sample was modest in size, these results replicate findings of a study conducted in Alaska almost thirty years ago, with forty employers and seventeen job coaches (Ward et al., 1993). The agreement among job coaches in this study and job coaches in Ward et al. (1993) demonstrate that despite the difference in

location and service provision context, and although significant changes have been made to employment legislation between both time periods, job coach services remain critically relevant. This study highlighted that job coaches accurately assessed what was important to employers when integrating an employee with disabilities into the workplace (Ward et al., 1993). Our results also extend prior findings by showing that job coaches are also sensitized to which services are considered important by individuals with disabilities who are engaged in the process of searching for and maintaining employment. The high consensus that we found among the three stakeholder groups with respect to the importance of job coaching services provides evidence for job coach support as a promising solution to increasing meaningful employment opportunities for individuals on the autism spectrum or with ID. Given the large diversity of labour forces, contexts and cultures, future research should evaluate the effectiveness and value of employment support services for people on the autism spectrum or with ID more expansively in other geographical regions.

Perceived importance of specific job search services

We also analyzed which specific services were rated most important by employees, employers and job coaches. For job search services, the item that was rated the highest by employees was matching the job seeker with a potential employer who has already hired someone with a disability, while the highest rated item by job coaches was determining the job seeker's job skills. For job retention services, the highest rated item by employees was to provide immediate training on the job when issues are detected during impromptu visits by job coaches. The item rated the highest by employers was to make impromptu visits or calls to the employee to see how things are going, echoing a previous study that also found this service to be rated the most important by employers (Ward et al., 1993). The items rated highest by job coaches were to

provide immediate training on the job when deficiencies are observed during impromptu visits, assist the employee in negotiating accommodations and adaptations to the job duties or the work environment, assist coworkers to provide feedback, instructions, and/or friendship, and assist the employee in increasing their speed and efficiency. Both employees and job coaches ranked immediate training when deficiencies are observed as the most important job retention service, thus further demonstrating the high agreement among the different groups.

Although the three groups generally rated all services as highly important, a comparison between ratings of importance revealed differences of large effect size between groups for three job search and three job retention services. A potential reason for these discrepancies is that job coaches' ratings of services may be influenced by their overall work experience with different clients, whereas employees and employers may be reporting on their own individual case. Our questionnaires did not specify to think about services in relation to a specific client, and as such, job coaches' responses may have been influenced by their broader knowledge and experience obtained through working with several clients. For job search services, job coaches attributed greater importance to the training of employees on workplace skills (e.g., interpersonal skills, communication, appropriate appearance and clothing) than did employees. This may be because job coaches have observed over time interpersonal and communication difficulties on the job, that are also self-identified by job seekers and employees on the autism spectrum. For instance, a small sample of employees on the autism spectrum identified that the interview process and negotiating interactions with coworkers cause them significant anxiety and difficulty (McKnight-Lizotte, 2018). Similarly, researchers who interviewed 18 adults on the autism spectrum about their experience in the workplace found that the most frequently mentioned challenge to employment success was the inability to master the socially demanding work environment

(Müller et al., 2003). Adults on the autism spectrum have reported that failure to navigate social interactions often leads to many unpleasant exchanges with their coworkers and employer (Bury et al., 2020; Müller et al., 2003). Social challenges are often attributed to the social communication abilities of the individual, such as knowing how to produce appropriate conversational cues (Bauminger-Zviely et al., 2014), read facial expressions and understand tone of voice (Paul et al., 2009), and respond in a reciprocal manner (Bauminger-Zviely et al., 2014; Nadig et al., 2010). However, elements of the workplace (e.g., lack of supports, employer responses; Bury et al., 2020), and negative biases towards people on the autism spectrum in the general population (e.g., Sasson et al., 2017) also contribute to social interaction challenges. Employers, especially those with limited experience or exposure with people on the autism spectrum or with ID, may struggle to understand these individuals, contributing to communication difficulty. Critically, negative biases are reduced in non-autistics who have more autism knowledge (Gillespie- Lynch et al., 2015; Sasson & Morrison, 2019), and autism knowledge obtained through brief awareness training (Gillespie- Lynch et al., 2015; Jones et al., 2021) has been shown to reduce negative biases and increase positive first impressions of individuals on the autism spectrum (Jones et al., 2021). Job coaches have the potential to play a significant role in both providing employers with autism knowledge, and training employees on workplace skills to bridge the communication gap between employees and employers (McKnight-Lizotte, 2018; Scott et al., 2015).

Second, employees rated being matched to an employer who has already hired a person with a disability as more important than did job coaches. Employers who have experience with inclusive hiring practices, such as hiring individuals with disabilities, show greater interest in hiring more employees with disabilities (Andersson et al., 2015; Hemphill & Kulik, 2016), and

have more positive attitudes towards these employees relative to those without such experiences (Morgan & Alexander, 2005). Employers of people with various disabilities have reported that the benefits of hiring inclusively include increased talent, brand loyalty, and an inclusive work culture (Henry et al., 2014). It seems then, that employees with disabilities can benefit from being matched to an employer who is already known to be supportive – this match may facilitate employment success and alleviate some of the anxiety that they might experience when transitioning into a new job (Hendricks, 2010). This finding should be taken into consideration by job coaches, who can prioritize employers who have previous experience with inclusive hiring practices. Future work should explore whether diversity and inclusion training can play a role in the facilitation of more welcoming and supportive attitudes and practices of employers.

Lastly, employees rated applying for government financial assistance as more important than did job coaches. With the aim of increasing labour market participation for people with disabilities and reducing employers' reluctance to hire inclusively, some governments have adopted policies that include giving employers financial assistance when hiring someone with a disability to offset a longer training period, a lower productivity or higher supervision needs, after an assessment. Studies have shown that this can act as an incentive for employers to hire and retain employees with disabilities (Fraser et al., 2010; Kaye et al., 2011). Perhaps persons with disabilities also believe that having this assistance may make the employer more likely to hire and keep them in their organization. Although in some cases this assistance may be necessary, the extensive use of salary subsidies may only reinforce employers' notion that people with disabilities are less productive and valuable than others (O'Brien & Dempsey, 2004). One recent study found that, although some employment support professionals viewed this incentive as positive, others viewed it as negative, indicating that it has the potential to undermine the

individual's strengths and contributions (Rashid et al., 2020). This might explain why job coaches in our study rated this service as less important – they may be aware of the possibility that an employer will focus on the monetary incentive, rather than the individual. This subsidy may also take away efforts to improve training and productivity.

Perceived importance of specific job retention services

For job retention services, job coaches rated providing information about non-work issues that might affect job performance (e.g., housing, financial and family difficulties) as more important compared to the other groups. This contradicts previous findings, with job coaches rating this service as the least important (Ward et al., 1993). However, having a liaison assist the individual in non-work issues and disclose any problems to employers has been perceived to be effective by support workers and supervisors, as this can potentially determine the success of a job (Hagner & Cooney, 2005). Discussions of non-work issues helps to contextualize the issues and build positive relationships. It may be that job coaches at large have dealt with issues unrelated to employment when working with a client and as such, are aware of the potential impact non-work issues can have on job performance and maintenance, and therefore understand the importance of this specific service.

Second, job coaches rated assisting the employee in increasing their speed and efficiency as more important compared to the other groups. In a previous study, employers also identified increasing speed and efficiency as an important service that job coaches should spend more time on (Ward et al., 1993). Although no large effect size was found, employers in our study also rated this service as more important than did employees. The higher ratings among job coaches and employers make sense, given that employers value productivity in the workplace (Scott et al., 2015). One study found that supervisors and coworkers were critical of individuals needing

more time to learn new tasks when they were not aware of the individual's diagnosis (Müller et al., 2003). Lack of flexibility and speed was also found to be an individual characteristic that predicted job loss among employees on the autism spectrum (Walsh et al., 2014). If employees cannot meet productivity expectations, it may be difficult for them to keep their jobs (Hendricks, 2010). However, employers must keep in mind that some employees may simply require more time to adapt to novel situations and learn new things (Müller et al., 2003), and can still be as equally productive as their neurotypical peers (Scott et al., 2017).

Lastly, job coaches rated assisting coworkers by providing feedback, instructions, and/or information on how to build friendships with the employee as more important than did employees and employers. This is consistent with other studies where employers believed that staff members who work with individuals on the autism spectrum should access better training (Hedley et al., 2017). Managers and coworkers can be educated about inclusive practices and about potential workplace accommodations (Hillier et al., 2007). In one study, several employees on the autism spectrum reported having increased job satisfaction when they had coworkers who were warm, open to diversity, and were willing to assist them in learning new tasks (Müller et al., 2003). In fact, a lack of awareness and understanding among employers and coworkers is one of the most significant barriers to positive employment outcomes for individuals on the autism spectrum, demonstrating the importance of appropriate training for supervisors and staff (López & Keenan, 2014). Providing training to employers and coworkers may also help the employee better fit into the workplace culture (Wilczynski et al., 2013).

Satisfaction with job coach support

Overall, a high proportion of employees and employers were satisfied with the job coach support received, suggesting that this employment support is highly valued by key members and

is meeting their needs. This finding supports previous research in which individuals on the autism spectrum cite ongoing job coach support as essential for the job search process, ensuring a smooth transition into the workplace, and facilitating communication between the employee and employer (Müller et al., 2003). In addition, more than half of the employers in our sample did not believe that they would have hired the individual or have been able to integrate the employee into their company without the supports that were provided by the job coaches. This finding compliments a synthesis review that found that the involvement of support workers (i.e., job coaches) is a key resource in building employer capacity to support employees with developmental disabilities (Rashid et al., 2017). Lastly, all employees and employers in our sample would recommend these services to other individuals on the autism spectrum or with ID, and to managers and organizations, which suggests that job coach support is beneficial for every stakeholder involved in the process.

4.2. Implications

The findings in our study provide evidence that job coach support services are effective for obtaining and maintaining employment for individuals on the autism spectrum or with ID and that this support is meeting stakeholder needs. Through this research partnership, the findings of the value added by job coach services, as well as the discrepancies between stakeholder groups in ratings of specific services, have been shared with the director and at AMO, who will use this information to inform their service provision. Job coaches can prioritize services perceived to be most important by employees and employers and can also explain, based on their own experiences, the purpose and value of other services that were perceived to be less important by these groups. Our results also indicate that job coach support for adults on the autism spectrum or with ID and their employers have a positive impact on facilitating the pathway to

employment. All employees and employers in our study would recommend these services, demonstrating the value in having these employment supports available to those with disabilities who are searching for employment and for potential employers. This speaks to the valuable work being done at AMO and the effectiveness of job coach support more broadly, in line with other research demonstrating that job coach support is effective in enhancing competitive employment for people with disabilities (Ellenkamp et al., 2016). Taken with other work demonstrating the cost-effectiveness of job coach support for people with disabilities (Hoffmann et al., 2014), our findings can build the case for local governments and policy makers that investing in job coach services pays forward.

There are certain limitations that should be considered when interpreting the results of this study. First, our sample size was notably small and recruited from a single community organization providing employment supports. Second, potentially even more so than in other studies due to the triads studied, selection bias may have affected our results as participation required consent from the employee, employer and job coach. Our sample may be reflective of those who have a positive outlook and experience regarding the support provided by job coaches, whereas those who declined to participate may have different views and experiences. Third, five of the nine employees in this study had a post-secondary degree, which plays a role in the amount of support required and the type of services perceived to be important. All of these factors may limit the generalizability of these results to the broader population of adults on the autism spectrum or with ID.

4.3. Conclusion

Research consistently demonstrates overwhelmingly low rates of employment for adults on the autism spectrum or with ID. Our results point to job coach supports as a promising

approach to facilitating the employment process for individuals on the autism spectrum or with ID and for their employers, within an ecosystem approach to employment advancement. Such services provide individualized and workplace supports designed to facilitate the access to and maintenance of employment, as well as to promote inclusive workplace environments. The findings outlined in this paper contribute to the field by offering the perspectives of multiple stakeholders and by providing a practical solution to the creation of more inclusive workplaces, where diversity is valued and where employees and employers are empowered and supported by job coach services.

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Conflict of interest

The authors declare that they have no conflict of interest.

References

- Andersson, J., Luthra, R., Hurtig, P., & Tideman, M. (2015). Employer attitudes toward hiring persons with disabilities: A vignette study in Sweden. *Journal of Vocational Rehabilitation*, 43(1), 41-50. <https://doi.org/10.3233/JVR-150753>
- Anderson, K. A., McDonald, T. A., Edsall, D., Smith, L. E., & Taylor, J. L. (2016). Postsecondary expectations of high-school students with autism spectrum

- disorders. *Focus on Autism and Other Developmental Disabilities*, 31(1), 16-26.
<https://doi.org/10.1177/1088357615610107>
- Bauminger-Zviely, N., Karin, E., Kimhi, Y., & Agam-Ben-Artzi, G. (2014). Spontaneous peer conversation in preschoolers with high-functioning autism spectrum disorder versus typical development. *Journal of Child Psychology and Psychiatry*, 55(4), 363-373.
<https://doi.org/10.1111/jcpp.12158>
- Black, M. H., Mahdi, S., Milbourn, B., Scott, M., Gerber, A., Esposito, C., Falkmer, M., Lerner, M. D., Halladay, A., Strom, E., D'Angelo, A., Falkmer, T., Bolte, S., & Girdler, S. (2020). Multi-informant international perspectives on the facilitators and barriers to employment for autistic adults. *Autism Research*, 13(7), 1195-1214.
<https://doi.org/10.1002/aur.2288>
- Bottema-Beutel, K., Kapp, S. K., Lester, J. N., Sasson, N. J., & Hand, B. N. (2020). Avoiding ableist language: Suggestions for autism researchers. *Autism in Adulthood*.
<https://doi.org/10.1089/aut.2020.0014>
- Bury, S. M., Flower, R. L., Zulla, R., Nicholas, D. B., & Hedley, D. (2020). Workplace social challenges experienced by employees on the autism spectrum: An international exploratory study examining employee and supervisor perspectives. *Journal of Autism and Developmental Disorders*, 1-14. <https://doi.org/10.1007/s10803-020-04662-6>
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences*. New York, NY: Routledge Academic.
- Dudley, C., Nicholas, D. B., & Zwicker, J. (2015). What do we know about improving employment outcomes for individuals with autism spectrum disorder? *The School of Public Policy Research Paper*, 8(32), 1-36.

Ellenkamp, J. J., Brouwers, E. P., Embregts, P. J., Joosen, M. C., & van Weeghel, J. (2016).

Work environment-related factors in obtaining and maintaining work in a competitive employment setting for employees with intellectual disabilities: A systematic review. *Journal of Occupational Rehabilitation*, 26(1), 56-69.

<https://doi.org/10.1007/s10926-015-9586-1>

Fraser, R. T., Johnson, K., Hebert, J., Ajzen, I., Copeland, J., Brown, P., & Chan, F. (2010).

Understanding employers' hiring intentions in relation to qualified workers with disabilities: Preliminary findings. *Journal of Occupational Rehabilitation*, 20(4), 420-426. <https://doi.org/10.1007/s10926-009-9220-1>

Gillespie-Lynch, K., Brooks, P. J., Someki, F., Obeid, R., Shane-Simpson, C., Kapp, S. K.,

Daou, N., & Smith, D. S. (2015). Changing college students' conceptions of autism: An online training to increase knowledge and decrease stigma. *Journal of Autism and Developmental Disorders*, 45(8), 2553-2566. <https://doi.org/10.1007/s10803-015-2422-9>

Hagner, D., & Cooney, B. F. (2005). "I do that for everybody": Supervising employees with autism. *Focus on Autism and Other Developmental Disabilities*, 20(2), 91-97.

<https://doi.org/10.1177/10883576050200020501>

Hedley, D., Uljarević, M., Cameron, L., Halder, S., Richdale, A., & Dissanayake, C. (2017).

Employment programmes and interventions targeting adults with autism spectrum disorder: A systematic review of the literature. *Autism*, 21(8), 929-941.

<https://doi.org/10.1177/1362361316661855>

Hemphill, E., & Kulik, C. T. (2016). Which employers offer hope for mainstream job opportunities for disabled people? *Social Policy and Society*, 15(4), 537-554.

<https://doi.org/10.1017/S1474746415000457>

Hendricks, D. (2010). Employment and adults with autism spectrum disorders: Challenges and strategies for success. *Journal of Vocational Rehabilitation*, 32(2), 125-134.

<https://doi.org/10.3233/JVR-2010-0502>

Henry, A. D., Petkauskos, K., Stanislawzyk, J., & Vogt, J. (2014). Employer-recommended strategies to increase opportunities for people with disabilities. *Journal of Vocational Rehabilitation*, 41(3), 237-248. <https://doi.org/10.3233/JVR-140716>

Hillier, A., Campbell, H., Mastriani, K., Izzo, M. V., Kool-Tucker, A. K., Cherry, L., & Beversdorf, D. Q. (2007). Two-year evaluation of a vocational support program for adults on the autism spectrum. *Career Development for Exceptional Individuals*, 30(1), 35-47.

<https://doi.org/10.1177/08857288070300010501>

Hoffmann, H., Jäckel, D., Glauser, S., Mueser, K. T., & Kupper, Z. (2014). Long-term effectiveness of supported employment: 5-year follow-up of a randomized controlled trial. *American Journal of Psychiatry*, 171(11), 1183-1190.

<https://doi.org/10.1176/appi.ajp.2014.13070857>

Irvine, A., & Lupart, J. (2008). Into the workforce: Employers' perspectives of inclusion. *Developmental Disabilities Bulletin*, 36, 225-250.

Jones, D. R., DeBrabander, K. M., & Sasson, N. J. (2021). Effects of autism acceptance training on explicit and implicit biases toward autism. *Autism*.

<https://doi.org/10.1177/1362361320984896>

Kaye, H. S., Jans, L. H., & Jones, E. C. (2011). Why don't employers hire and retain workers with disabilities? *Journal of Occupational Rehabilitation*, 21(4), 526-536.

<https://doi.org/10.1007/s10926-011-9302-8>

- Lawer, L., Brusilovskiy, E., Salzer, M. S., & Mandell, D. S. (2009). Use of vocational rehabilitative services among adults with autism. *Journal of Autism and Developmental Disorders*, 39(3), 487-494. <https://doi.org/10.1007/s10803-008-0649-4>
- López, B., & Keenan, L. (2014). *Barriers to employment in autism: Future challenges to implementing the Adult Autism Strategy*. Portsmouth: Autism Research Network.
- Lysaght, R., Cobigo, V., & Hamilton, K. (2012). Inclusion as a focus of employment-related research in intellectual disability from 2000 to 2010: A scoping review. *Disability and Rehabilitation*, 34(16), 1339-1350. <https://doi.org/10.3109/09638288.2011.644023>
- Marriage, S., Wolverson, A., & Marriage, K. (2009). Autism spectrum disorder grown up: A chart review of adult functioning. *Journal of the Canadian Academy of Child and Adolescent Psychiatry*, 18(4), 322-328.
- Martin, V., & Lanovaz, M. (2021). Program evaluation of a community organization offering supported employment services for adults with autism. *Research in Autism Spectrum Disorders*, 82, 101741. <https://doi.org/10.1016/j.rasd.2021.101741>
- McKnight-Lizotte, M. (2018). Work-related communication barriers for individuals with autism: A pilot qualitative study. *The Australian Journal of Rehabilitation Counselling*, 24(1), 12-26. <https://doi.org/10.1017/jrc.2018.4>
- Moore, C. L., Harley, D. A., & Gamble, D. (2004). Ex-post-facto analysis of competitive employment outcomes for individuals with mental retardation: National perspective. *Mental Retardation*, 42(4), 253-262. [https://doi.org/10.1352/0047-6765\(2004\)42<253:EAOCEO>2.0.CO;2](https://doi.org/10.1352/0047-6765(2004)42<253:EAOCEO>2.0.CO;2)
- Morgan, R. L., & Alexander, M. (2005). The employer's perception: Employment of individuals with developmental disabilities. *Journal of Vocational Rehabilitation*, 23(1), 39-49.

Müller, E., Schuler, A., Burton, B. A., & Yates, G. B. (2003). Meeting the vocational support needs of individuals with Asperger syndrome and other autism spectrum disabilities. *Journal of Vocational Rehabilitation*, 18(3), 163-175.

Nadig, A., Lee, I., Singh, L., Bosshart, K., & Ozonoff, S. (2010). How does the topic of conversation affect verbal exchange and eye gaze? A comparison between typical development and high-functioning autism. *Neuropsychologia*, 48(9), 2730-2739.

<https://doi.org/10.1016/j.neuropsychologia.2010.05.020>

National Autistic Society. (2016). *The Autism Employment Gap: Too Much Information in the Workplace*. https://www.basw.co.uk/system/files/resources/basw_53224-4_0.pdf

Neary, P., Gilmore, L., & Ashburner, J. (2015). Post-school needs of young people with high-functioning autism spectrum disorder. *Research in Autism Spectrum Disorders*, 18, 1-11.

<https://doi.org/10.1016/j.rasd.2015.06.010>

Nicholas, D. B., Mitchell, W., Dudley, C., Clarke, M., & Zulla, R. (2018). An ecosystem approach to employment and autism spectrum disorder. *Journal of Autism and Developmental Disorders*, 48(1), 264-275. <https://doi.org/10.1007/s10803-017-3351-6>

O'Brien, J., & Dempsey, I. (2004). Comparative analysis of employment services for people with disabilities in Australia, Finland, and Sweden. *Journal of Policy and Practice in Intellectual Disabilities*, 1(3-4), 126-135. <https://doi.org/10.1111/j.1741-1130.2004.04027.x>

Paul, R., Orlovski, S. M., Marcinko, H. C., & Volkmar, F. (2009). Conversational behaviors in youth with high-functioning ASD and Asperger syndrome. *Journal of Autism and Developmental Disorders*, 39(1), 115-125. <https://doi.org/10.1007/s10803-008-0607-1>

- Prince, M. J. (2016). *Inclusive employment for Canadians with disabilities: Toward a new policy framework and agenda*. Institute for Research on Public Policy. <https://irpp.org/wp-content/uploads/2016/08/study-no60.pdf>
- Rashid, M., Thompson-Hodgetts, S., & Nicholas, D. (2017). Building employer capacity to support vocational opportunities for adults with developmental disabilities. *Review Journal of Autism and Developmental Disorders*, 4(2), 165-173.
<https://doi.org/10.1007/s40489-017-0105-5>
- Rashid, M., Thompson-Hodgetts, S., & Nicholas, D. (2020). Tensions experienced by employment support professionals when seeking meaningful employment for persons with developmental disabilities. *Research in Developmental Disabilities*, 99.
<https://doi.org/10.1016/j.ridd.2020.103603>
- Roux, A. M., Rast, J. E., Anderson, K. A., & Shattuck, P. T. (2017). *National autism indicators report: Developmental disability services and outcomes in adulthood*. Life Course Outcomes Research Program, A.J. Drexel Autism Institute, Drexel University.
https://familyvoicesofca.org/wp-content/uploads/2017/06/Natl-Autism-Indicators-Report-2017_Final.pdf
- Sasson, N. J., Faso, D. J., Nugent, J., Lovell, S., Kennedy, D. P., & Grossman, R. B. (2017). Neurotypical peers are less willing to interact with those with autism based on thin slice judgments. *Scientific Reports*, 7, Article 40700. <https://doi.org/10.1038/srep40700>
- Sasson, N. J., & Morrison, K. E. (2019). First impressions of adults with autism improve with diagnostic disclosure and increased autism knowledge of peers. *Autism*, 23(1), 50-59.
<https://doi.org/10.1177/1362361317729526>

- Scott, M., Falkmer, M., Girdler, S., & Falkmer, T. (2015). Viewpoints on factors for successful employment for adults with autism spectrum disorder. *PloS ONE*, 10(10), <https://doi.org/10.1371/journal.pone.0139281>
- Scott, M., Jacob, A., Hendrie, D., Parsons, R., Girdler, S., Falkmer, T., & Falkmer, M. (2017). Employers' perception of the costs and the benefits of hiring individuals with autism spectrum disorder in open employment in Australia. *PloS ONE*, 12(5). <https://doi.org/10.1371/journal.pone.0177607>
- Tse, J. W. (1993). Employers' attitudes toward employing people with mental handicap. *International Journal of Rehabilitation Research*, 16(1), 72-76. <https://doi.org/10.1097/00004356-199303000-00012>
- Turcotte, M. (2014). *Persons with disabilities and employment*. Statistics Canada. <https://www150.statcan.gc.ca/n1/en/pub/75-006-x/2014001/article/14115-eng.pdf?st=1cOPuCXw>
- Wallace, G. L., Budgett, J., & Charlton, R. A. (2016). Aging and autism spectrum disorder: Evidence from the broad autism phenotype. *Autism Research*, 9(12), 1294-1303. <https://doi.org/10.1002/aur.1620>
- Walsh, L., Lydon, S., & Healy, O. (2014). Employment and vocational skills among individuals with autism spectrum disorder: Predictors, impact, and interventions. *Journal of Autism and Developmental Disorders*, 1(4), 266-275. <https://doi.org/10.1007/s40489-014-0024-7>
- Ward, K. M., Dowrick, P. W., & Weyland, A. (1993). Job coach follow-along activities: Analysis and recommendations. *Developmental Disabilities Bulletin*, 21(2), 36-51.

- Wilczynski, S. M., Trammell, B., & Clarke, L. S. (2013). Improving employment outcomes among adolescents and adults on the autism spectrum. *Psychology in the Schools*, 50(9), 876-887. <https://doi.org/10.1002/pits.21718>
- Yin, R. K. (2012). Case study methods. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds.), *APA handbooks in psychology®. APA handbook of research methods in psychology, Vol. 2. Research designs: Quantitative, qualitative, neuropsychological, and biological* (p. 141–155). American Psychological Association. <https://doi.org/10.1037/13620-009>
- Zwicker, J., Zaresani, A., & Emery, J. H. (2017). Describing heterogeneity of unmet needs among adults with a developmental disability: An examination of the 2012 Canadian Survey on Disability. *Research in Developmental Disabilities*, 65, 1-11. <https://doi.org/10.1016/j.ridd.2017.04.003>

Table 1. Employee demographics (n = 9)

	N (%)
Mean age (SD)	37 (6.3)
Sex (proportion male)	8 (89)
Education	
Some high school	1 (11)
High school diploma	3 (33)
Postsecondary education/Cegep degree	4 (44)
University degree	1 (11)
Diagnosis	
Autism spectrum	6 (67)
ID	2 (22)
Autism spectrum + ID	1 (11)

Table 2. Ratings of importance with job search services from employee and job coach perspectives

Specific Job Search Service	Employee Rank in Importance	Employee Mean Rating (SD)	Job Coach Rank in Importance	Job Coach Mean Rating (SD)	Cohen's <i>d</i> (Employee-Job Coach rating)
Matching the job seeker with a potential employer who had already hired someone with a disability*	1	4.78 (.44)	7	4 (.71)	1.32
Provide training about the work site	2	4.67 (.5)	5	4.44 (.73)	.37
Supporting the job seeker in their job search, including interview support	2	4.67 (.5)	4	4.56 (.53)	.21
Determining realistic career types for the job seeker	2	4.67 (.71)	2	4.89 (.33)	.4
Determining the job seeker's job skills	3	4.56 (.53)	1	5 (0)	+
Evaluating eligibility for a provincial employer compensation grant and taking steps towards it*	3	4.56 (.73)	8	3.67 (.71)	1.24
Accompanying the job seeker to a potential place of work	4	4.44 (.73)	6	4.22 (.44)	.37
Educating the job seeker about the job market and about conducting a job search	4	4.44 (.53)	7	4 (.71)	.7
Determining the job seeker's interests	4	4.44 (.73)	3	4.78 (.44)	.56
Training the job seeker on workplace skills (e.g., interpersonal skills, communication, appropriate appearance and clothing)*	5	4.11 (1.05)	3	4.78 (.44)	.83

Note. *Large effect size difference found between employees and job coaches in rating of importance. + Note that Cohen's *d* could not be calculated due to a job coach standard deviation of 0.

Table 3. Ratings of importance with job retention services from employee, employer, and job coach perspectives

Specific Job Retention Service	Employee Rank in Importance	Employee Mean Rating (SD)	Employer Rank in Importance	Employer Mean Rating (SD)	Job Coach Rank in Importance	Job Coach Mean Rating (SD)	Cohen's <i>d</i> (Employee-Job Coach Rating)	Cohen's <i>d</i> (Employer-Job Coach Rating)
Providing immediate training on the job when deficiencies are observed during impromptu visits	1	4.33 (.87)	2	4.11 (.6)	1	4.67 (.5)	.48	1.01
Providing additional training to enable the supported employee to perform a broader range of job duties	2	4.22 (.83)	6	3.67 (.87)	6	3.78 (.67)	.58	.14
Soliciting feedback on the regular basis about supported employee's performance	2	4.22 (.97)	6	3.67 (.87)	2	4.56 (.73)	.4	1.11
Making impromptu visits or calls to the employee just to see how things are going	3	4.11 (1.05)	1	4.33 (.71)	3	4.44 (.73)	.36	.15
Assisting the supported employee in negotiating accommodations and adaptations to the job duties or the work environment	4	4 (1.58)	3	4 (.71)	1	4.67 (.71)	.55	.94
Assisting in solving safety and health concerns	4	4 (1.12)	4	3.89 (.6)	3	4.44 (.73)	.47	.82
Providing additional supervision	5	3.78 (1.48)	3	4 (.71)	5	3.89 (.78)	.09	.15

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Assisting coworkers to provide feedback, instructions, and/or friendship*	5	3.78 (.97)	3	4 (.87)	1	4.67 (.71)	1.05	.84
Mediating interpersonal relationships between supported employees and coworkers	6	3.67 (1.8)	2	4.11 (.6)	3	4.44 (.73)	.56	.49
Assisting in clarifying work schedules	7	3.44 (1.33)	5	3.78 (1.30)	4	4.33 (1)	.76	.47
Assisting in increasing speed and efficiency*	7	3.44 (1.33)	5	3.78 (.97)	1	4.67 (.5)	1.22	1.15
Providing information about non-work issues that might affect job performance*	8	3.33 (1.5)	6	3.67 (1.12)	2	4.56 (.53)	1.09	1.02

Note. *Large effect size difference found between employees and job coaches and employers and job coaches in rating of importance.

Table 4. Job coach (n = 8) identification of employer characteristics supportive of job maintenance

Characteristic	Frequency	Percent
Patient, open to accommodations and supporting the individual's needs	5	63
Available and easy to access	4	50
Open-minded and inclusive	4	50
Collaboration with and open to the organization's services/communication with the employment counsellor	4	50
Effective communication (i.e., clear expectations, provide effective feedback)	3	38
Awareness of the clientele (both employers and coworkers)	3	38
Know the employee (i.e., become familiar with their skills, characteristics, areas of growth)	3	38
Structured and organized	3	38

Table 5. Employee and employer satisfaction with job coach support

	Mean Rating	Absolutely (%)	Not at all (%)
<i>Employee Satisfaction</i>			
Would you recommend these services to people on the autism spectrum or with ID who are searching for a job?	4.78	100	0
<i>Employer Satisfaction</i>			
Would you have decided to hire this employee without the support of the organization's services?	2.22	11	56
Would you have been able to integrate this employee into your organization without the support of this organization?	2.33	11	56
Would you recommend these services to another manager or another organization?	4.78	100	0
<i>Employee Satisfaction (Cont'd)</i>		Satisfied (%)	Dissatisfied (%)
The support received by the counselor while searching for a job	4.44	89	11
The support received by the counselor after I started my job	4.44	89	0
With the organization in general	4.67	89	0
<i>Employer Satisfaction (Cont'd)</i>			
The information given to you by the employment counsellor	4.56	89	0
The support given by the employment counsellor to your employee	4.63	89	0
With the information and advice the employment counsellor gave to you	4.5	88	0
With the information and advice the employment counselor gave to the other employees of your team	3.67	50	17
With the help offered to solve one or more problematic situations in relation to this employee	4.67	83	0
With the organization in general	4.57	86	0