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**Stakeholders' views on effective employment support strategies for autistic university
students and graduates entering the world of work**

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Abstract

Purpose

This research aims to examine effective support strategies for facilitating employment of autistic students and graduates by answering the following research question: What constitutes effective employment support for autistic students and graduates?

Design/methodology/approach

Data were collected using the method of empathy-based stories (MEBS) as part of a multinational European project's Web-based survey. The data consisted of 55 writings about effective strategies and 55 writings about strategies to avoid when working with autistic students and graduates. The material was analysed using qualitative inductive content analysis. Narratives were created to illustrate desirable and undesirable environments and processes as they would be experienced by students, supported by original excerpts from the stories.

Findings

Analysis revealed that effective employment support for autistic students and graduates comprised three dimensions of support activity: Practices based on the form and environment of support, social interaction support, and autism acceptance and awareness. These dimensions were present in both recommended and not recommended support strategy writings.

Originality/value

The results add to the literature on autism and employment with its focus on the novel context of autistic university students and graduates. Effective strategies will be based on person-centred planning, to include not only the individual impact of autism, but individual career goals, workplace characteristics in the chosen field, employer needs, and allocation of the right support. There is no one-size-fits-all strategy, but rather an individualised process is needed, focused on identification of strengths, adaptation of employment and work processes, and improved understanding and acceptance of autism by management, colleagues and administration in the workplace.

Keywords: *autism, university, autistic students and graduates, employment, support strategies, stakeholder*

Introduction

In recent years, increasing numbers of young autistic people have entered and completed higher education (HESA, 2018; Jackson, Hart and Volkmar, 2018). These students often possess a range of skills and abilities that make them desirable as future employees, such as attention to detail, honesty, loyalty, willingness to work longer hours and punctuality (Lorenz et al., 2014; Scott et al., 2017). In addition, employment in many sectors now requires a degree as a minimum qualification.

However, autistic students leaving university currently face a substantial employment gap as compared to non-disabled students. Even when compared to other disability groups, autistic students or graduates have the lowest employment prospects of all (Allen and Coney, 2018). This has a negative impact on their quality of life, and represents a substantial economic and societal loss, estimated at £1m per individual (Rogge and Janssen, 2019). For example, in the UK only 33% of autistic graduates are in full-time employment, compared to 71% of their non-disabled peers (Allen and Coney, 2018).

Further, it is well-documented that many autistic students and graduates are under-employed. For example, working part-time when they would prefer full-time employment (National Autistic Society, 2016), or in low-level rather than graduate posts in their field (Baldwin et al., 2014). Others are mal-employed, where the requirements of the post are inconsistent with their skill set (AGCAS, 2019; Baldwin et al., 2014; Vincent, 2020), or are unable to find any paid work in their field of expertise. Barriers to graduate employment may be further complicated due to intersectional impacts with factors such as race or gender (Hayward, McVilly and Stokes, 2018). While some research exists that is relevant to employment of autistic people in general (e.g., Harmuth et al., 2018), there is clearly a need for research into

effective support and advice targeted to university students and graduate careers, and especially regarding careers advice that takes place in a university context (Allen and Coney, 2018).

Therefore, as part of a European project (see <http://www.imageautism.com>), the authors have conducted research to discover how best to create an environment and professional support structure that supports employability and employment of autistic students and graduates. The key stakeholders involved in this process are 1) autistic university students and graduates, 2) careers advisors working within universities or with autistic university students, 3) academics embedding employability into their teaching and facilitating work experience for students, 4) higher education managers responsible for making decisions that affect support provision, and 5) potential and actual employers of autistic students.

Using the stakeholders' perceptions, the purpose of this study is to examine effective support strategies for facilitating employment of autistic students and graduates. The research reported here was collected using the method of empathy based stories (MEBS) (Wallin, Koro-Ljungberg and Eskola, 2018) to address the following research question: *What constitutes effective employment support for autistic university students and graduates?* Our key sub-questions were: *What can professionals involved in delivering effective support for students and graduates moving from university to graduate employment do?* and *What should they avoid doing?*

By examining stakeholders' writings on the effective employment support, this study demonstrates important practical implications for supporting autistic students' and graduates'

employment. Moreover, the findings provide relevant guidance on effective support, which will be beneficial to practitioners in the employment sector.

Overview of stakeholders

Like all university students and graduates, those with autism also hope that their studies will be followed by a graduate career in or related to their field of study. Autistic students expect to receive some level of careers guidance and advice during their studies, and the university's role in providing employability support is increasingly recognised. They frequently undertake activities to enhance their own employability, ranging from developing specific skills that are in high demand, to seeking careers advice and support within or outside the university.

The European Union's Bologna Process Report (European Commission, 2018) identified two key duties universities have to enhance students' employability: (1) providing effective career guidance and (2) embedding practical training or work placements in study programmes. Furthermore, those with disabilities (e.g., autism) should be provided with assistance in finding and obtaining employment (UN Convention 2006). This may manifest itself in a variety of ways, depending on policies and practices at the university level, faculty level and programme level (Schomberg and Teichler, 2007). For example, some degree courses incorporate careers-related activities into assessed modules, other courses provide specialist careers modules, and some hold subject-specific job fairs. Universities may offer a variety of additional career-related services and supports, and in some cases these are available to graduates as well as current students.

University careers advisors have a key role in connecting students, and often recent graduates, with appropriate employment opportunities. When universities employ careers

advisors, their activities range from making information about career choices available online, to organising job fairs, to offering individualised or small-group help with CVs and interview preparation (Long and Hubble, 2016). However, research indicates that disabled students are generally disadvantaged when it comes to careers advice (Williams, 2007), and more often than not a “one size fits all” approach is applied that fails students with specific needs and preferences. Within the EU, only 15 countries target under-represented student groups at all, and only three target disabled students specifically (European Commission, 2015). And although autistic students are the group most likely to be unemployed after graduation, they are also the least likely to receive effective careers advice whilst at university (Allen and Coney, 2018). Finally, while autistic students are often highly successful academically, they can experience social isolation at university (Gurbuz et al., 2019). This can lead to lower career ambitions, fewer helpful career contacts, and less well developed social skills, such as teamwork capabilities, developed through university social life, as has been highlighted regarding other student groups, such as working-class university students (Bradley and Ingram, 2013) and “disadvantaged” student groups generally (e.g. Williams, 2007). This implies a need for additional or different kinds of help than non-autistic students may receive.

Academics and higher education managers also play a role, whether this is through making recommendations to individual students or writing personal recommendations, or through making it a policy to deliver employability-related content within courses. However, it is possible that academic staff feel less confident about their ability to support autistic students in gaining employability skills. For their part, *employers* are unsure about how to support an autistic employee during recruitment and on the job (National Autistic Society, 2016). It is often the case that employers work alongside academics in developing students’

employability, though activities like arranging pre-graduation work experience, internships and job shadowing. Along with mock interviews, these activities have been identified as key catalysts for gaining employment after graduation (Eurydice, 2014).

Methods

Context

The data presented in this study were collected using a Web-based survey. This survey was part of a larger collaborative research project, The IMAGE (project see <http://www.imageautism.com>), carried out by universities in five European countries (the UK, the Netherlands, France, Germany and Finland). In this joint effort, the aim was to examine the state of career advice for university students, and the most and least effective strategies that support autistic university students' and graduates' employability and transition to employment. The project seeks to work with autistic university students and graduates, university careers advisors, employers and academic stakeholders to find solutions. The IMAGE project responds to the concerns expressed by autistic students themselves in previous research (see e.g. Cashin, 2018; <http://www.autism-uni.org>).

Data

The sub-set of data used here was focused on the constituents of effective and ineffective employment support for autistic university students and graduates. Participants also answered questions regarding their country of residence, age, gender ("male," "female," "diverse"), autism diagnosis, current position (higher education career advisor, academic tutor, employer, higher education managers and/or policy makers, other), tenure of their current position and exact job title.

Participants

Out of the total sample of 122 questionnaire responses, fifty-five (55) were included due to missing data points for the analysed questions. Participants were recruited via social media or Internet forums, or directly via e-mail. The survey was administered in the languages of the participating countries (English, Finnish, Dutch, French, German). The survey participants were a diverse group. Of the 55 participants, 35 were female, 19 male, and one person identified as non-binary; their ages ranged from 21 to 62, with a median age of 46. They fell into the professional categories shown in *Figure 1*. Most surveys were filled in by professionals from the original five European countries: UK (28), Finland (6), France (5), Netherlands (1) and Germany (11). However, four came from further afield, with one survey response each from professionals in Ireland, Malta, Turkey and Tanzania. Three of the 55 professionals who responded themselves had an autism diagnosis.

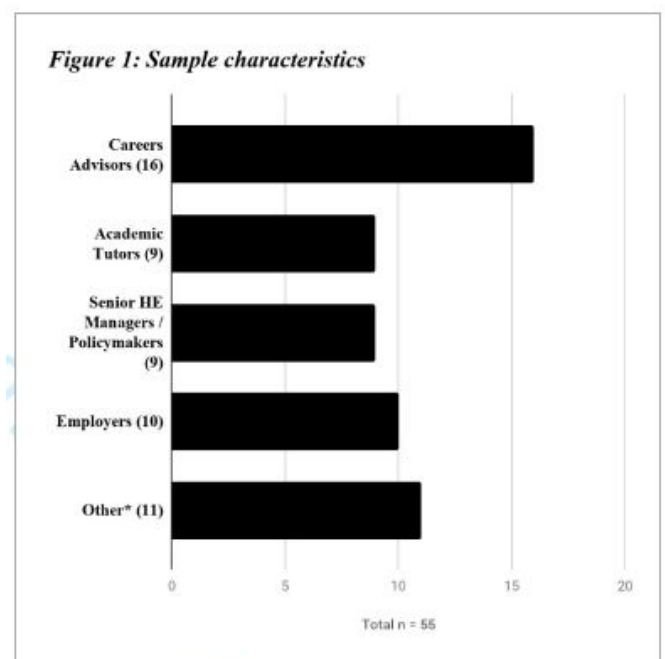
Figure 1. Participants' professional categories.

* 'Other' consisted of 1 each in the following categories: medical specialist, autism specialist

disability advisor, academic and digital development advisor, teaching fellow, employer and placement advisor, mental health and autism advisor, professor, nursing management, works director, job search advisor and vice-president for disabilities.

Ethical considerations

Ethical approval for the research was obtained from the ethics committee prior to data collection. Participation was voluntary; no compensation was provided. Informed consent was obtained from all participants included in the study. Participants could stop at any time without explanation.



Data collection method

Data were collected using the method of empathy-based stories (MEBS) as a part of the Web-based survey (see Kultalahti, 2015). MEBS is a qualitative data collection method in which researchers provide ‘frame stories’ that prompt informants to produce short texts (Wallin et al., 2018). Usually MEBS utilises two frame stories that often are opposite to each other (e.g. negative versus positive scenario of a situation), and can vary in length. The frame stories are expected to make informants form connections with the story, as the frame stories describe events or situations that the informant can relate to, either based on personal experience or by imagining themselves in the situation (*ibid.*). Using frame stories as a data collection method, MEBS produces data that describe informants’ perceptions, mental images and expectations with regard to a specific phenomenon. Therefore, MEBS does not necessarily concentrate on actual lived experiences, as the informants’ writings can also portray possible connections and perceptions that are based on the informants’ imagination as they describe what they would do in a hypothetical situation (*ibid.*).

This research employed two frame stories during data collection that aimed to elicit aspects of the most and least effective strategies for achieving employment goals for autistic students and graduates:

- 1) *Someone you know is new in working with autistic people and therefore asks you for your advice. He/she is unsure with his/her actions regarding interactions and collaboration with an autistic person and asks you for your experiences in dealing with autistic students/graduates/employees. Thinking about your past experiences, which strategies proved to be most effective for achieving joint goals?*
- 2) *And in your experience, are there strategies you would not recommend?*

Data analysis

First, the writings from five different countries were translated into English. Texts describing strategies were then organized in two separate worksheets within an Excel file (*most effective strategies* and *least effective strategies*). Although there are data from different countries, our purpose was not to focus on any individual countries or analyse comparisons between countries, so the data was analysed as a whole in order to illustrate effective support strategies. Second, unfinished and unanswered writings were removed from the data. As a result, the data consisted of 55 writings about effective strategies and 55 writings about strategies that should be avoided when working with autistic students and graduates. The respondents' succinct writings had an average length of 36 words.

Third, the data were analysed using qualitative inductive content analysis (Creswell, 2003). The data were read through multiple times so that the first author was familiar with the writings, cut into sentence-length units of analysis, and then organized again in two separate Excel sheets. Units that were not related to the research questions were removed from the data. The first author then used inductive open coding, which resulted in combining codes into larger themes, and further combining these themes into categories. Emerging categories were finally organized to correspond to recommended strategies and not recommended strategies. Further, in the abstraction process, the different categories that emerged within these two main categories were formulated into three dimensions: 1) *Practices based on the form and the environment of support*, 2) *social interaction strategies* and 3) *strategies based on autism awareness and acceptance* (see *Table 1*). In the final phase of the analysis, narratives were created (see Polkinghorne, 1995) about recommended and not recommended strategies for professionals under each dimension to illustrate how the desirable and undesirable environments and processes would look like in the work context.

Table 1. Three support practice dimensions that consist of recommended and not recommended strategies, and the themes under the strategy categories. The number in brackets indicates the number of analysis units merged into the theme.

Strategies professionals recommend	Dimension	Strategies professionals do not recommend
Clear structure (18) Person-centred planning (17) Clear instructions (12) Individualised support arrangements (11) Focusing on strengths (4) Sensory friendly environment (4) Multidisciplinary collaboration (3)	Practices based on the form and the environment of support	Avoid unstructured work activities (9) Avoid too many instructions at once (5) No individual planning (4) No collaboration between professionals (2) Avoid sensory overload (3)
Clear communication (21) Giving personal space (5) Building relationships and trust (3) Respecting the individual (3)	Social interaction support	Unclear communication (7) Avoid forcing (7) Showing no respect (5) Reduce group work (2)
Getting to know the autistic person behind the diagnosis (10) Increasing autism awareness (3)	Autism acceptance and awareness	Making assumptions about autistic person (15) Ignoring autism (2)

To ensure trustworthiness of analysis, we used investigator triangulation (Rothbauer, 2008) throughout the analysis. All the authors had a meeting where they were involved in reading frame story material and formulating higher-level themes before a thorough analysis was conducted by the first author. The first author talked about the codes, categories and dimensions with all authors throughout the analysis. Finally, the first author discussed the emerged categories and dimension with all authors until consensus was reached.

Findings

Analysis of the participant writings revealed that effective employment support for autistic people comprised three dimensions of activity: *Practices based on the form and the environment of support, social interaction support, and autism acceptance and awareness.*

These dimensions were present in both recommended and not recommended support strategy writings. The three subheadings below include both recommended and not recommended strategy narratives (in italics at the beginning and end of each section) that are followed by a closer examination of the enhancing and hindering factors, which are supported by original excerpts from the respondent writings. Encapsulating findings in a narrative form is intended to help professionals visualise what “good practice” and “undesirable practice” would look like in their work context.

Practices based on the form and environment of support

Strategies professionals recommend

When an autistic person is planning their move into the world of work or they already have a job, those working with them need to ask questions and listen carefully to make sure that they understand the individual's needs, including the student's, graduate's or employee's personal profile and career goals. The guidance process and support is client-led, strength-based and solution-focused; where needed, stakeholders communicate with each other (with the individual's permission). Autistic jobseekers or employees know what to expect. When there are steps that they need to carry out, such as making a new CV or attending an interview, they receive clear instructions. Overall, the process of career support has a clear structure, and takes place in an environment adjusted to meet individual sensory needs and preferences.

The dimension called *practices based on the form and the environment of support* included recommended support strategies: Clear structure, person-centred planning, clear instructions, individualised support arrangements, focusing on strengths, sensory-friendly environments, and multidisciplinary collaboration. The stakeholders emphasised that effective support strategies should focus on individualised support and consideration for individual needs; for example, the responses included: “Understand the point of view of the autistic individual by asking them direct questions and never make assumptions” (R11), and “Proceeding in the young person's own pace but at the same time creating clear structures in social situations e.g. Now we are concentrating on doing this and we have one hour.” (R46). Further, individual (as opposed to group) meetings were considered important: “One to one meetings with an autistic individual.” (R4). Clear structures and instructions were also highlighted by the respondents' stories about the importance of providing clarity in assigning tasks at work: “Clear tasks help and simple instructions, control over activities.” (R41); “Clarity of instruction” (R15). Further, it was recognised that effective support requires the various professionals to work together in order to support autistic individuals: “Collaboration with the various stakeholders involved should be emphasised” (R53).

Strategies professionals do not recommend

As the autistic student or graduate starts work in a new work environment, they are not sure who can help, or they receive too much information at once, which can be challenging for them to deal with without appropriate support. Support is provided in a group setting in a busy workspace that has a lot of sensory overload, and/or the new work environment fits this description. When they need to complete assignments, they receive many instructions and tasks at once, and there is little clarity about how to carry out the assignment or what the end goal is. Everyone providing support does it their own way, and they don't collaborate.

Regarding the unhelpful strategies under the dimension *practices based on the form and the environment of support*, five strategies were considered ineffective: unstructured work activities, giving too many instructions at once, not providing individual planning services, working in isolation rather than collaborating with other professionals, and neglecting to take the potential for sensory overload into account. The respondents considered it vital that autistic employees should not be asked to do something that may cause them anxiety. For example, the respondents considered the following: “Forcing them to contribute” (N7), “Stress them” (N8), and “Group or team work is to be avoided at first because the person will be destabilized if they have to work with people they do not know.” (N55).

Social interaction support***Strategies professionals recommend***

When autistic students and graduates seek careers advice and support during the job-seeking process and at the workplace, they encounter clear communication in the context of relationships based on trust. They feel like they have time to think and consider their options, and that professionals have regard to their personal views and circumstances. For their part, professionals also feel supported in their roles, and know when and where they can go for help.

The dimension called *social interaction strategies* consisted of five themes: clear communication, giving personal space, building relationships and trust, and respecting the individual. As one respondent put it, “Clear, explicit and consistent style of communication

allowing plenty of time for the other person to think and respond.” (R17) The social interaction strategies also included such direct advice as “Be patient!” (R28), as well as strategies geared more towards overall understanding of individual differences: as one participant said, supporters should, “Show your love and support.” (R7).

Strategies professionals do not recommend

When autistic students and graduates are seeking support during transition to the job market or are working, they encounter a system where group activities are the norm. They do not feel that their individual views or needs are respected, but instead they are made to feel uncomfortable with others during team work. Overall, communication from professionals can be unclear, and may be contradictory.

The actions not recommended in the second dimension were related to four factors that participants said hinder social interaction for autistic people: unclear communication, forcing participation in social situations, showing no respect, and pushing group work. The respondents emphasised that “Telling them what to do” (N34), “Shaming them” (N7), and “Pushing them to their boundaries” (N8) are likely to make autistic people feel anxious and stressed during employability activities or in the workplace.

Autism acceptance and awareness

Strategies professionals recommend

Professionals understand that autistic students and graduates frequently face issues in the job-seeking process and employment that are related to lack of autism awareness and acceptance. When an autistic person is entering employment, each person providing support or in the work community makes an effort to get to know them as a person. Although professionals make a point of finding out about the potential impact of autism spectrum conditions, they don't make assumptions about students, graduates or employees, but instead they endeavour to understand individual differences and to be open-minded.

The third dimension, recommended strategies for enhancing *autism acceptance and awareness*, included two factors: getting to know the autistic person behind the diagnosis and increasing autism awareness. The respondent stories emphasised the importance of understanding and accepting autism as a fundamental component of effective support strategies. For example, the respondent stories said that professionals working with autistic people should “See the individual, listen to what they are saying, put the stereotypes to one side.” (R25) and “Treat each person as an individual, do not presume to know about them, get to know them.” (R27). Another respondent story echoed that sentiment, saying: ‘In my opinion, the autism spectrum is so broad that you can't give general advice other than to treat them the same as any other person.’ (R44).

Strategies professionals do not recommend

When autistic students and graduates seek support and accommodations at the workplace, they encounter negative attitudes and stereotypes related to their medical diagnosis of autism. Professionals’ views towards them are guided by what they “know” (or do not know) about autism, rather than the person’s actual characteristics; or professionals pretend that autism will have no impact on their job search.

The respondents’ stories also showed two hindering factors related to autism acceptance and awareness: making assumptions about autistic people and ignoring autism.

Assumptions about and ignorance of autism in employment was illustrated by respondents. For example, “Presuming that all autistic people behave or perform in a similar way.” (N9) and “Don't assume you know what this person is or isn't just as they have a diagnosis of autism.” (N22). Further, as one respondent put it “Ignoring that they are autistic.” (N28) can severely hinder the process of “fitting in” at the workplace, because then employers and co-workers lack information about why they may think or

behave differently from the norm, and have no basis for adapting environments or processes.

Discussion

This study used qualitative data derived from a questionnaire to discover which strategies carried out by various stakeholders support the employment of autistic university students and graduates, and which strategies tended to hinder employment for this group. To illustrate the potential impact of these strategies, we constructed narratives describing how autistic students and graduates might experience ideal service provision, and poor-quality service provision, across the three dimensions identified.

The results of the current study add to the literature on autism and employment with its focus on the novel context of autistic university students and graduates. The current context eliminated one key barrier to employment identified in other studies, possession of work qualifications (Lorenz and Heinitz, 2016). Previous research located three general categories of barriers, formality problems (which corresponds roughly to our category of *practices based on the form and the environment of support*), job demand problems and social problems. Lorenz and Heinitz (2016) compared the experiences of autistic people in mainstream employment and those in autism-specific employment. They found that in mainstream employment, social problems predominated, whereas in autism-specific employment formality problems came to the fore. Furthermore, autistic employees felt that they were often required to come up with solutions to their own problems, no matter which employment situation they were in, although those in non-specialist employment were more likely to look for external support and assistance. This could represent a lack of understanding in the work environment or lack of adequate support, but as autistic employees

in autism-specific environments also solved many workplace issues themselves, it could represent greater self-efficacy and an environment that supported adaptation based on personal needs.

Perhaps the most important of the respondents' suggestions related to taking a strengths-focused, positive and person-centred approach. Our findings are in line with earlier studies on autism and employment concerning the barriers and facilitators identified. For example, Lorenz and Heinitz (2016) also focused on using concepts from positive psychology, such as encouraging development of self-efficacy, as the best strategies for assisting autistic individuals looking for work. Furthermore, the field of employment can also make a difference. Tasks and responsibilities are generally more structured for all employees in fields like information and engineering, and this can be helpful for autistic employees (Hagner and Cooney, 2005). However, many autistic people seek work in humanities-based fields (Lorenz et al., 2014), where social communication and group-based practices often predominate, based on the preferences of neurotypical managers and employees. These unexamined assumptions behind application, employment and work processes can give rise to barriers. Professionals involved in careers advice and employment need to be aware of how to work with (potential) employees to identify barriers, and there is still much work to be done regarding working productively with employers on addressing these. The need for direct communication with employers to ensure successful employment of skilled autistic employees in mainstream settings has been substantiated previously (e.g., Mawhood and Howlin, 1999), but the findings of Lorenz and Heinitz (2016) indicate that support professionals should not simply assume that autism-specialist workplaces always know how to make appropriate adjustments.

One issue that was specific to university-based support is that many autistic students and graduates, as well as university and other support professionals report a lack of coordination and communication between the various stakeholders. Discussion of autistic students and graduates, and their needs must be approved by the autistic person themselves, as sharing personal and diagnostic information will otherwise contravene privacy regulations. That said, our respondents appeared to agree that it would be useful if, for example, university careers support and disability support professionals could cooperate: the latter will know much about what has been effective support practice for a specific student, for example. This information can be used directly by careers support staff, and can also form the basis for recommendations to employers. There is also a potential need for self-advocacy skills and discussion of disclosure to be part of the careers advice “package” for students and graduates with autism, and for careers advisors to have greater knowledge of the laws, services and supports that can help autistic students and graduates in the workplace.

Limitations and future directions

The current study has limitations that should be taken into account. Although there appears to be international similarities in support, drawing generalisations from a small qualitative data set used in study is not suggested. The reader has to be cautious when applying the results to other context, as the participants come from different countries and with varying amount of experience in working with autistic students and graduates. Further data collection is unquestionably needed for probing deeper into the data. For example, stories about employment support using MEBS could be collected from autistic students and graduates. This would also help to cross-validate the writings collected from stakeholders. Furthermore, interviewing various stakeholders, and autistic students and graduates can help to explore these issues further. Additionally, MEBS as a data collection method has its limitations. The

method captures respondents' potential experiences on the topic (see Wallin et al. 2018). Therefore, the respondents' writing do not necessarily reflect their actual lived experiences about providing effective employment support. Furthermore, although the stakeholder stories represent participants from different countries, our main aim was not to examine the contextual disparities between nations, it would be important to address this in future studies. Overall, collecting more data could also capture variations on regional or national economic and societal conditions. Views about autism and inclusion may also differ between countries, necessitating the development of different kinds of programmes to enhance awareness and acceptance of autistic people in graduate employment. Such contextual differences (e.g. employment markets, social and cultural structures and legislation) should be clearly addressed in future studies.

Conclusions

This research sought to discover which strategies carried out by university careers advisors or other stakeholders support the employment of autistic students and graduates, and which strategies tended to hinder the employment for this group. We found strategies could be categorised into three dimensions: Practices based on the form and the environment of support, social interaction support, and autism acceptance and awareness. Based on our findings, effective strategies will be based on person-centred planning, to include not only the individual impact of autism, but individual career goals, workplace characteristics in the chosen field, employer needs, and allocation of the right support. Although our findings show that there are international similarities in support and that solutions are relatively simple, yet there is no one-size-fits-all strategy. Instead, an individualised process focused on identification of strengths, adaptation of employment and work processes, and improved understanding and acceptance of autism in the workplace should be emphasised. Dilemmas

clearly exist regarding data-sharing, privacy and disclosure. As long as support for autistic and other disabled job-seekers is diagnosis-based rather than needs-based, procedures and safeguards will be needed to ensure that applicants are fairly considered, and employees receive the adaptations that they need. Although the stakeholders' writings provide valuable practical implications about supporting autistic students and graduates in employment, drawing generalisations from the current study is not suggested. Further exploration of the topic involving larger qualitative data set is unquestionably needed.

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References

- Allen, M. and Coney, K (2018). *What Happens Next? A Report on the First Destinations of 2016 Disabled Graduates*. Sheffield: The Association of Graduate Careers Advisors. Available at: <https://www.agcas.org.uk/Latest/what-happens-next-2018> [accessed 11 October 2019]
- AGCAS (Association of Graduate Careers Advisory Services). (2019). "What Happens Next? 2018 Report." Accessed May 12 2020.
- <https://www.agcas.org.uk/Latest/launch-of-what-happens-next-2019>.

- Baldwin, S., Costley, D. and Warren, A. (2014). 'Employment activities and experiences of adults with high-functioning autism and Asperger's disorder,' *Journal of Autism and Developmental Disorders*, pp. 1–10. doi: 10.1007/s10803-014-2112-z.
- Bradley, H. and Ingram, N. (2013). "Banking on the future: Choices, aspirations and economic hardship in working-class student experience," in: Atkinson, W., Roberts, S. and Savage, M. [eds.] *Class Inequality in Austerity Britain: Power, Difference and Suffering*. London, Palgrave Macmillan, pp. 51-69.
- Cashin, A. 2018. "The Transition from University Completion to Employment for Students with Autism Spectrum Disorder," *Issues in Mental Health Nursing* 39 (12): 1043–1046. doi: 10.1080/01612840.2017.1401188.
- European Commission. (2018). *The European Higher Education Area in 2018: Bologna Process Implementation Report*. Brussels: EACEA European Unit of Eurydice. Accessed January 14 2020. https://eacea.ec.europa.eu/national-policies/eurydice/content/european-higher-education-area-2018-bologna-process-implementation-report_en
- Eurydice (2014). *Modernisation of Higher Education in Europe: Access, Retention and Employability*. Luxembourg: Publications Office of the European Union. doi: 10.2797/72146. Available at: https://eacea.ec.europa.eu/national-policies/eurydice/content/modernisation-higher-education-europe-access-retention-and-employability_en [accessed 10 October 2019]
- Gurbuz, E., Hanley, M. and Riby, D.M. (2019). 'University students with autism: The social and academic experiences of university in the UK,' *Journal of Autism and Developmental Disorders*, 9(2), pp. 617–631. doi: 10.1007/s10803-018-3741-4.

- Harmuth, E., Silletta, E., Bailey, A., Admas, T., Beck, C. and Barbic, S.P. (2018). 'Barriers and facilitators to employment for adults with autism: A scoping review,' *Annals of International Occupational Therapy*, 1(1), pp. 31-40. doi: 10.3928/24761222-20180212-01.
- Hayward, S., McVilly, K.R. and Stokes, M.A. (2018). "Challenges for females with high functioning autism in the workplace: A systematic review," *Disability and Rehabilitation*, 40(3), pp. 249-258. doi: 10.1080/09638288.2016.1254284.
- HESA (2018). 'UK domiciled student enrolments by disability and sex 2014/15 to 2017/18 (Table 15),' Cheltenham: Higher Education Statistics Agency. Available at: <https://www.hesa.ac.uk/data-and-analysis/students/table-15> [accessed 10 October 2019].
- Jackson, S.L.J., Hart, L., Brown, J.T. and Volkmar, F.R. (2018). 'Brief Report: Self-reported academic, social, and mental health experiences of post-secondary students with autism spectrum disorder,' *Journal of Autism and Developmental Disorders*, 48(3), pp. 643–650. doi: 10.1007/s10803-017-3315-x
- Kultalahti, S. et al. (2015). 'Generation Y: Challenging clients for HRM?,' *Journal of Managerial Psychology*. ISSN: 0268-3946. Available at: <https://www.emerald.com/insight/content/doi/10.1108/JMP-08-2014-0230/full/html> [accessed 10 October 2019]
- Long, R. and Hubble, S. (2016). *Briefing Paper: Careers Guidance in Schools, Colleges and Universities*, London, House of Commons Library. Available at: https://dera.ioe.ac.uk/26579/2/CBP-7236_Redacted.pdf [accessed 10 October 2019].

- Lorenz, T., Frischling, C., Cuadros, R. and Heinitz, K. (2016). Autism and overcoming job barriers: Comparing job-related barriers and possible solutions in and outside of autism-specific employment, *PLoS ONE*, *11*(1), doi: 10.1371/journal.pone.0147040.
- Lorenz, T., & Heinitz, K. (2014). Aspergers–different, not less: occupational strengths and job interests of individuals with Asperger's Syndrome. *PloS one*, *9*(6), e100358.
- Mawhood, L. and Howlin, P. (1999). ‘The outcome of a supported employment scheme for high-functioning adults with autism or Asperger syndrome,’ *Autism*, *3*(3), pp. 229-254. doi: 10.1177/1362361399003003003.
- National Autistic Society (2016). *The Autism Employment Gap*, London, National Autistic Society. Available at: <https://www.autism.org.uk/get-involved/media-centre/news/2016-10-27-employment-gap.aspx> [accessed 10 October 2019]
- Rogge, N. and Janssen, J. (2019). ‘The economic costs of Autism Spectrum Disorder: A literature review,’ *Journal of Autism and Developmental Disorders*, *49*(7), pp. 1573-3432. doi: 10.1007/s10803-019-04014-z.
- Romoser, M. (2000). ‘Malemployment in autism,’ *Focus on Autism and other Developmental Disabilities*, *15*(4), pp. 246-247. doi: 10.1177/108835760001500416
- Rothbauer, P.M. (2008). ‘Triangulation,’ In: Given, L.M. [Ed.] *The SAGE Encyclopedia of Qualitative Research Methods*. Available at: <https://methods.sagepub.com/reference/sage-encyc-qualitative-research-methods/n468.xml> [accessed 10 October 2019]
- Schomberg, H. and Teichler, U. (2007). *Higher Education and Graduate Employment in Europe: Results from Graduates Surveys from Twelve Countries*, Vienna, Springer Science & Business Media.

Scott, M., Jacob, A., Hendrie, D., Parsons, R., Girdler, S., Falkmer, T. and Falkmer, M.

(2017). 'Employers' perceptions of the costs and the benefits of hiring individuals with autism spectrum disorder in open employment in Australia,' *PLoS ONE*, 12(5), e0177607. doi: 10.1371/journal.pone.0177607.

Vincent, J. (2020). Employability for UK University Students and Graduates on the Autism

Spectrum: Mobilities and Materialities. *Scandinavian Journal of Disability Research*, 22 (1): 12–24.

Williams, J. (2007). 'Disadvantage in higher education: A view from the institutional careers

service,' *Tertiary Education and Management*, 13(4), pp. 349-363.

Figure 1: Sample characteristics

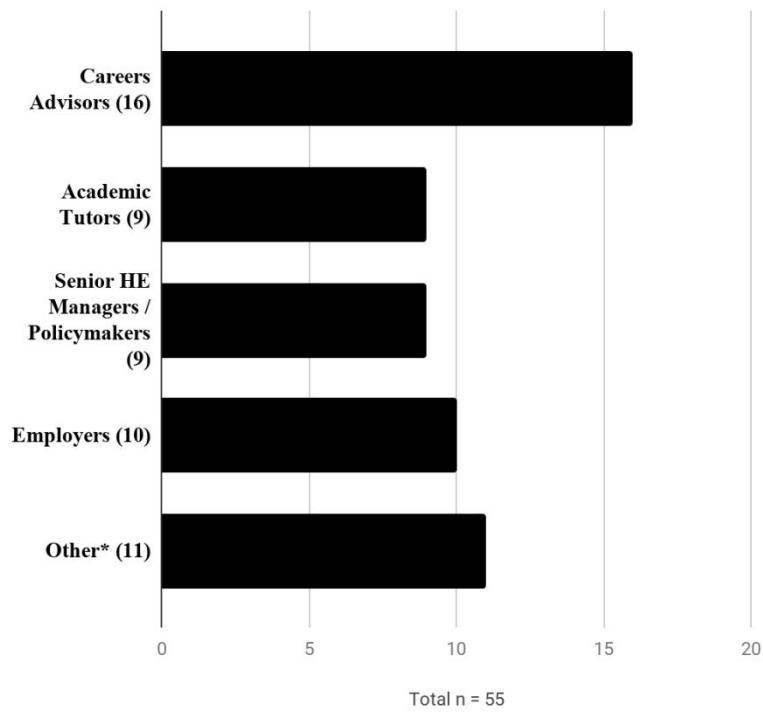


Table 1. Three support practice dimensions that consist of recommended and not recommended strategies, and the themes under the strategy categories. The number in brackets indicates the number of analysis units merged into the theme.

Strategies professionals recommend	Dimension	Strategies professionals do not recommend
Clear structure (18) Person-centred planning (17) Clear instructions (12) Individualised support arrangements (11) Focusing on strengths (4) Sensory friendly environment (4) Multidisciplinary collaboration (3)	Practices based on the form and the environment of support	Avoid unstructured work activities (9) Avoid too many instructions at once (5) No individual planning (4) No collaboration between professionals (2) Avoid sensory overload (3)
Clear communication (21) Giving personal space (5) Building relationships and trust (3) Respecting the individual (3)	Social interaction support	Unclear communication (7) Avoid forcing (7) Showing no respect (5) Reduce group work (2)
Getting to know the autistic person behind the diagnosis (10) Increasing autism awareness (3)	Autism acceptance and awareness	Making assumptions about autistic person (15) Ignoring autism (2)