COMMENTARY



A Conflict of Interests: A Motivational Perspective on Special Interests and Employment Success of Adults with ASD

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Published online: 8 June 2019 © Springer Science+Business Media, LLC, part of Springer Nature 2019

Abstract

A course of action often suggested in an attempt to improve employment outcomes of adults with autism spectrum disorder, is to match between special interests and job opportunities. In this commentary, we propose that the match may be more complicated than it seems, possibly overseeing more pressing employment needs that should be answered such as: the job's characteristics, labor market demands, and stress resulting from job expectations. Self determination theory of motivation is suggested as a lens through which the association between special interests and a paying job can be examined, highlighting important considerations that hold the potential to increase employment success. Recommendations for new research directions and vocational rehabilitation practice are discussed.

Keywords Autism spectrum disorder · Adulthood · Special interests · Motivation · Employment · Self determination theory

Employment carries a pivotal role in adults' lives. Successful integration in the vocational world can lead to multiple benefits, such as: financial benefits of earning money; improvement of quality-of-life and well-being; and an upgrade of social capital—by taking part in society (Hendricks 2010; Gal et al. 2015; Duffy et al. 2016). For individuals with autism spectrum disorder (ASD), successful integration into the labor market poses a central challenge upon entering adulthood (Howlin and Moss 2012; Hedley et al. 2017; Scott et al. 2018).

Research points out advantages that adults with ASD possess, which might prove useful from a vocational perspective, such as: enhanced visual search abilities; a systematic work style; and expertise in certain fields, associated with their characteristic special interests (Caldwell-Harris and Jordan 2014; Simmons et al. 2009; Krieger et al. 2012). Despite these possible advantages, existing research paints a rather gloomy picture of labor market prospects for adults with ASD. Studies indicate high rates of unemployment, unfavorable job conditions for those who do work, and a

relatively high prevalence of 'over-education', meaning that adults with ASD work in jobs which fall below their educational attainments (Baldwin et al. 2014; Chen et al. 2015; Hedley et al. 2017).

Studies centered on first hand experiences of adults with ASD point to factors that promote work success such as a match between career choices and interests and a tolerant work environment (Krieger et al. 2012; Müller et al. 2003). Along with these relatively few positive aspects, many work-related factors are experienced as drawbacks. Difficult job application processes, a lack of opportunities for training and career advancement, and social communication difficulties were some of the main obstacles mentioned (DePape and Lindsay 2016). The unsatisfactory employment outcomes highlight the need to improve labor market access and integration and to examine employment for individuals with ASD more comprehensively, through multi-disciplinary and multi-faceted perspectives.

In this commentary, we discuss the often-advocated practice of matching adults with ASD with job opportunities that correspond with their special interest areas. Following clinical practice in vocational counselling and rehabilitation for adults with ASD, we would like to suggest that the match may be more complicated than it seems, possibly overseeing more pressing employment needs that should be answered. Self determination theory (SDT) will then be described as a



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framework with potential to inspire new research questions and promote vocational rehabilitation practice.

The Occupational Potential of Special Interests

Current trends of research and practice in the field of autism take a shift from a focus on impairments, to acknowledging unique abilities individuals with autism might hold (Baron-Cohen 2017). This strength-based approach suggests that characteristics of autism can be potentially useful and become an advantage. A common characteristic of ASD suggested to potentially improve functioning is having special interests (Klin et al. 2007). Special interests are known as one of the core features of ASD, listed in the diagnostic criteria of DSM-5 within the domain of restricted and repetitive patterns of behaviors and interests. They are described as highly restricted, fixated interests that are abnormal in intensity or focus (American Psychiatric Association 2013). Other definitions of special interests suggest a less deficitfocused approach, describing them as: "those passions that capture the mind, heart, time and attention of individuals with AS, providing the lens through which they view the world" (Winter-Messiers 2007, p. 142).

Special interests are common among children diagnosed with ASD, and can be expressed in a variety of modalities (Spiker et al. 2012). Engagement in special interests may include acquiring information, discussing facts specific to a preferred topic, repetitive patterns of play or excessive attachment to favored objects (Spiker et al. 2012). During childhood, special interests are mostly assessed through the eyes of parents and caregivers, which show ambivalence towards the activity. Appreciation for the knowledge and enthusiasm is expressed, alongside concerns that special interests are used as an obsessive escape from coping with daily challenges, which prevents their children from expanding their experiences (Winter-Messiers 2007). Other studies show the possible negative impact special interests might have on functioning of children with ASD, causing them to miss out on important environmental information and interfering with self-guided activities and interactions (Klin et al. 2007). Special interests of children with ASD were found to be different from those of typically developing (TD) children in content (mostly involving nonsocial and especially mechanical characteristics), in rigidity and in the difficulty to disengage from them (Turner-Brown et al. 2011).

Studies of special interests in adulthood affirm their presence in the lives of adults with ASD. Kirchner and Dziobek (2014), surveyed special interests among adults with ASD, and reported that along with the common association of ASD with the natural sciences, special interests were also related to social sciences and creative fields. Grove et al.

(2018) reported that the most common topics of interest among adults were: autism, computers/gaming, music and nature/gardening. Many adults with ASD mentioned more than one special interest, and dedicated a significant amount of time to engaging in them (Grove et al. 2018; Kirchner and Dziobek 2014).

Individuals with ASD often display a favorable approach to their special interests, emphasizing their positive implications on self-image, social skills, emotions, abilities and well-being (Winter-Messiers 2007; Koenig and Williams 2017; Grove et al. 2018). McDonnell and Milton (2014) associate special interests (and other repetitive activities) with the aspired feeling of 'flow': a form of intense engagement and enjoyment (Csikszentmihalyi 1975). In comparison to TD adults, adults with ASD were more attracted to areas of interest that can be systemized (Baron-Cohen et al. 1999) had more specific interests, and a greater number of interests overall (Jordan and Caldwell-Harris 2012).

Given these positive views on special interests, it is often suggested they can be utilized to enhance different aspects of the individuals' life (Winter-Messiers et al. 2007). Embedding special interests in learning curricula is considered a 'best practice' approach in education accommodated to the needs of students with ASD (Guldberg 2010; Gunn and Delafield-Butt 2016). Recommendations to include special interests in teaching programs are common, as they seemingly enhance learning engagement (Leach and Duffy 2009; Mancil and Pearl 2008; Lanou et al. 2012; Lindsay et al. 2014). Other evidence shows that treatment programs that incorporate special interests can increase the acquisition of socio-emotional skills and peer interaction (Golan et al. 2010; Koegel et al. 2013).

In the employment arena, it is also suggested that special interests could and should be used to promote labor market integration (Koenig and Williams 2017; Winter-Messiers et al. 2007; Kirchner and Dziobek 2014; Grandin and Duffy 2008). The finding that youth with ASD have clear ideas linking their special interests to dreams of future professional careers (Winter-Messiers 2007), further supports the association between special interests and work. A practical application of this theoretical approach was developed by Bross and Travers (2017) in the form of a structured transition-to-work program for students in secondary education. The program is carried out during high school, with the aim of expanding employment experiences that are aligned with the special interests of the students. Reports of such programs' outcomes are still needed in order to evaluate their effectiveness in securing appropriate and satisfactory employment for adults with ASD.

In order to understand the underlying mechanisms that might explain the possible advantages of this match, special interests are suggested to function as intrinsically relevant motivators for work (Vogeley et al. 2013; Kirchner



and Dziobek 2014). Intrinsic work motivation is defined as an engagement in work primarily for its own sake, because the work itself is satisfying and/or it gives the individual the opportunity to express personal interests (Gagné and Deci 2005). Winter-Messiers et al. (2007) asserted that special interests have the potential to prompt work motivation, as they lead to positive feelings, resulting from engagement in activities associated with the area of interest. They noted that "A job related to an individual's special interest area could mean the difference between a daily struggle to complete work-related tasks or the satisfaction of a meaningful job well done each day" (p. 78). While this approach seems very reasonable, it appears that there are still theoretical and practical gaps to be addressed regarding the relationship between special interests and vocational interests.

The idea of matching personal interests with job choice is long embedded in traditional career theories that are based on person-environment fit. These involve identifying the individual's skills, abilities, and interests and matching them with appropriate potential careers (Blustein 2006). The definition of vocational interests is: "trait-like preferences to engage in activities, contexts in which activities occur, or outcomes associated with preferred activities that motivate goal-oriented behaviors and orient individuals toward certain environments" (Rounds and Su 2014, p. 98). While individuals with ASD mostly engage in special interests in their free time, not bound to context or environment, measurements of vocational interests are specifically contextualized in work environments (Su et al. 2019). A number of studies looked into vocational interests of adults with ASD (Good 2016; Lorenz and Heinitz 2014), but did not relate them to these individuals' special interests. While a relationship between the two dimensions is plausible, at this point, a connection between special interests and vocational interests is not substantiated. Mynatt et al. (2014) questioned the usefulness of vocational interest questionnaires in vocational counselling for students with ASD, stating that the narrow scope of special interests may limit the applicability of such questionnaires. Furthermore, they suggested that unwillingness to explore various career options and low self-awareness often characterizing young adults with ASD, may challenge the process of career choice. As for the suggestion that special interests relate to high skills or abilities, although anecdotally demonstrated (Grandin 2006), to the best of our knowledge this relationship is yet to be empirically established in relation to employment. Overall, it seems that the practice of matching special interests to work opportunities calls for further inquiry.

Special Interests in Light of Labor Market Demands

For adults with ASD, the road to employment is often accompanied by many challenges, described in length in previous studies such as: difficulties related to communication and social interaction; difficulties in task execution resulting from impairments in executive-functions; and difficulties in modulating sensory input (Hedley et al. 2017; Chen et al. 2015; Hendricks 2010). In light of such barriers, certain job characteristics are preferable. Many workers with ASD prefer a structured work environment (Scott et al. 2015), and have difficulty with demands of flexibility (Scott et al. 2017). Hence, successful integration is more likely to be achieved in tasks that are consistent, predictable and rulebased. Combining these task characteristics with a job that also matches the special interest may be ideal, but in many cases, is not feasible, due to labor market demands, and the adult's cognitive characteristics and emotional aspects.

Special interests that are very specific (such as certain historical periods), or considered as entertainment (such as computer games or TV shows) are not easily matched by appropriate jobs that are required in the labor market. Other commonly reported interests like music or art, lead to vocational fields that are often unstable. Vocational success in these fields requires self-promotion, self-management and networking skills, all of which pose a challenge for adults with ASD. Some adults with ASD possess good systemizing skills (Baron-Cohen et al. 1999). For these, various scientific areas of interest can become an occupational advantage. This could be the case for individuals with high cognitive and adaptive skills. However, even in these fields, a successful career will usually require various personal and interpersonal competence.

Jobs on the corporate ladder that may be more interesting and fulfilling, also tend to be more complicated and unexpected, requiring various executive-functions (e.g. attention shifting, planning, working memory, multi-tasking) and social-communication abilities that pose a challenge for many adults with ASD (Hendricks 2010; Happé et al. 2006). In like manner, special interests have been linked to the concept of 'monotropism', described as a cognitive tendency to focus on a single or narrow number of issues with a high level of focus, possibly excluding others (Wood 2019). This style could present a potential pitfall, when the will to concentrate on specific tasks or topics may contradict the job requirements or the employer's priorities. When one expects to work in a job that is as interesting and fulfilling as freely engaging in his special interest, and when these expectations do not materialize, frustration and attrition may result.

Another possible friction between special interest and work might be due to emotional factors, such as stress.



Studies point to stress as a major obstacle in the work context of adults with ASD (Camarena and Sarigiani 2009). The constant need to perform and overcome work-related difficulties requires a great deal of effort and is sometimes described as exhausting (Hurlbutt and Chalmers 2004). Stressful conditions can also lead to a display of maladaptive behaviors such as outbursts (Hendricks 2010; Seaman and Cannella-Malone 2016) or absenteeism. The need to meet the employer's expectations and to be productive an inherent part of a labor-market job—can by itself be a stressful factor, affecting emotional well-being. In contrast, first-hand accounts of individuals with ASD, suggest that the purpose of engaging in special interests is to reduce anxiety and self-regulate stress (Winter-Messiers 2007; Zafrani 2014). Special interests sometimes represent a "safe haven", as they offer a familiar break from the feeling of chaos that can accompany daily life of many adults with ASD. While engaging in special interests sometimes represents a break from the daily struggle, a paying job represents the pressure to perform. This contrast suggests that turning a special interest into a paying job may have a paradoxical effect. Arguably, turning the special interest into a paying job may even hamper its positive calming quality.

All things considered, it seems that for the sake of finding and retaining a paying job over time, workers may need to compromise. However, as described above, engaging in a special interest may stand in contrast with the need to compromise. Hence, despite the benefits of intrinsic motivation they carry, special interests may not be the only and not even the main consideration when pursuing paid employment. If employees are expected to carry out some tasks in which they do not find an interest, it can be difficult to maintain a motivation to work over time, making motivation a basic concept that requires further attention.

An example pointing to a possible motivational problem among individuals with ASD was expressed in research by Cheak-Zamora et al. (2015), focusing on the concerns of adolescents and their caregivers. Caregivers expressed concerns about the possibility that their children will be interested in jobs that are not feasible and worried about their inability to prompt motivation. As one of the fathers said: "my son ... had a job. He did get fired from his job... behavior related. But, I mean, he has no motivation..." (p. 554). When a mismatch between interest and job tasks occurs, other motivational anchors might need to be substantiated in order to achieve the goal of a stable employment.

Self Determination Theory of Motivation—A Suggested Framework for Navigating Employment

SDT of motivation (Deci and Ryan 2000) has been widely researched in work contexts in the general population (Gagné and Deci 2005; Gagné et al. 2015), establishing practical implications and interventions for promoting desirable employment outcomes. Previous studies on special interests, pointed to SDT as a theoretical framework that can promote an understanding of the origins and underlying mechanisms of special interests of individuals with ASD (Grove et al. 2016; Koenig and Williams 2017; Grove et al. 2018). Thus, SDT has the potential to promote our understanding of factors related to employment integration of adults with ASD in general, and shed light on the complex relationship between special interests and work in particular.

Theories of motivation, including SDT, cluster motivation into two categories: intrinsic motivation, mentioned before, and extrinsic motivation, defined as receiving something external to the work itself, such as income and other benefits (Ryan and Deci 2000). SDT takes a step further from the intrinsic/extrinsic motivation dichotomy, and proposes that there are varied types of extrinsic motivations. The concept of self-determination can be used to distinguish between types of extrinsic motivation (Ryan and Deci 2000). Self-determined behavior involves acting with a sense of desire and having an experience of choice. In contrast, controlled behavior involves acting with a sense of pressure and obligation. The STD model suggests a motivation continuum on which various types of motivation differ by the extent of feeling of autonomous choice and self-determination guiding the behavior. At the one end is intrinsic motivation, considered to present the highest level of self-determined behavior, and at the other end—is amotivation, which reflects no intention to act, or in other words, lacks self-determination. The process related to the differences in degrees of self-determination is also defined as internalization: individuals taking in values, attitudes, or regulatory structures, thus less and less depending on the presence of an external incentive (Ryan and Deci 2000).

Another aspect distinguishing SDT from other motivation theories is the assumption that goal-directed self-determined behavior can be achieved only when three psychological needs are satisfied: competence, relatedness, and autonomy (Baard et al. 2004; Deci et al. 2001; Gagné et al. 2015; Reis et al. 2000). Blustein (2006) explains the expression of these needs in the work context: The feeling of autonomy provides a sense of authenticity, choice, volition and self-regulation; Social relatedness is



the feeling of being connected to others in a meaningful way. Workers often describe their satisfaction in seeing friends and co-workers as being a source of joy in an otherwise meaningless task; Finally, the need for competence is related to a person's basic strive to experience success and a feeling of mastery. Accordingly, SDT suggests that frustration of these three basic needs can lead to a decrease in motivation.

Although research has yet to examine SDT in work context of adults with ASD, a number of studies addressed main concepts of the theory, enabling us to infer insights relevant to our target population.

According to SDT, autonomy is considered a fundamental human need. Choice was found to lead to improved interest and better performance in an academic task for children with ASD (Koegel et al. 2010) and to increased academic performance of students with ASD (Wehmeyer et al. 2010). Shea et al. (2013) investigated the role that autonomy plays in academic and social functioning of adolescents with ASD, showing that teachers' support for autonomy increased self-determination, which in turn increased scholastic competence. Pfeiffer et al. (2018) identified autonomy as one of the factors leading to job satisfaction in adults with ASD. Accordingly, an autonomous choice of a job that is related to a special interest, can lead to a more satisfying job. At the same time, SDT emphasizes that choice is not solely based on intrinsic motivation but can reflect an autonomous decision based on different considerations (Blustein 2006). In both cases, it is necessary that the employee will be an active agent in the processes of making an occupational choice and the integration into the workplace.

Given the social difficulties of individuals with ASD, discussing the need for social relatedness is particularly important. Work provides an opportunity for connecting to others, and for some adults with ASD it may provide the only opportunity for social interaction in daily life. Studies that look into experiences of adults with ASD clearly show an expression of social interest. Such support can be found in a qualitative study by Krieger et al. (2012) that looked into contextual factors which contribute to successful labor market participation of adults diagnosed with ASD. The importance of social relatedness was apparent, and reflected in the words of one of the participants interviewed saying: "My profession gives me a sense of fulfillment and stimulation, and allows me to meet other people, thus reminding me of my place in the world" (p. 149). In the study of Pfeiffer et al. (2018) participants reported higher levels of job satisfaction when social and relational aspects of their work environment were perceived as more positive. The contribution of a feeling of social relatedness to work satisfaction can help maintain motivation over time, without having to depend on finding an ongoing interest in the tasks performed.

Turning to the need for competence, according to SDT it involves feelings of being effective and capable to achieve desired outcomes, whereas competence frustration involves feelings of failure and doubts about one's efficacy (Chen et al. 2015). Support for the importance of the need for competence among employees with ASD can be found in the study of Müller et al. (2003) who interviewed adults with ASD about their work experience. Participants repeatedly used terms such as "hard worker" and "good worker" to describe themselves, and expressed pride in their skills. Lorenz and Heinitz (2014) found a positive relationship between occupational self-efficacy, and pro-activeness, that can be considered as a form of self-determined behavior. Having a job in which the abilities of the worker do not match the employer's performance expectations could harm the fulfillment of the need for competence, thus leading to a decrease in motivation, and consequently in work satisfaction and stability.

In conclusion, concepts of SDT seem highly relevant to the process of career rehabilitation of adults with ASD. SDT highlights factors, both internal and external, that should be considered when supporting their employment integration. It offers an explanation as to why the benefits of finding a job matching special interests might be evened out, or in some cases even outweighed, when considered together with other important needs.

Implications for Future Research and Practice

The complexity demonstrated in this commentary implies that the goal of improving work integration of adults with ASD requires special efforts and 'out of the box' solutions. In order to enhance our understanding of the feasibility and the advantages of aligning special interests with job choice, supporting empirical evidence is needed. Quantitative data assessing special interests in relation to job content and employment outcomes can indicate the extent and implications of this suggested match. From a broader perspective, the core concept of motivation, discussed in this article, seems an important factor in work success which calls for further research. Scott et al. (2017) stated that "for adults with ASD the motivation for engaging in employment is no different to those of the general working population" (p. 2), but empirical examination of the concept has not yet been carried out. It is possible that extrinsic motivation (e.g. work environment or salary) might have higher weight in work engagement and job satisfaction of adults with ASD than intrinsic motivation. Moreover, in accordance with SDT, satisfaction of the basic needs for autonomy, competence and relatedness might increase motivation even when the job is not related to one's special interests or is not intrinsically



motivating. Research on this topic can help expand the knowledge on employment needs of individuals with ASD with the goal of improving vocational success, long-term stability, and well-being.

Extensive theories on working experience such as SDT, offer insights into the underlying mechanisms of work motivation and other desirable employment outcomes. So far, the use of theoretical models is limited in studies of work and ASD. It seems that research in the field of autism in relation to work mostly asks if a particular intervention works (Hedley et al. 2017; Scott et al. 2019), rather than what are the underlying factors that predict successful occupational outcomes. Theoretical constructs can promote the understanding of how different interventions are administered, and why they work for each individual. Other useful theories in the field of vocational psychology can promote an understanding of the relationship between special interest areas and vocational interests (e.g., Holland's RIASEC model, see Lorenz and Heinitz 2014), and examine how special interests shape career decisions and outcomes. In the field of occupational therapy, the Theory of Human Occupation (Kielhofner 2008) can offer further insight in important factors such as volition narratives (Raber et al. 2010) and the way they shape occupational perceptions of adults with ASD. Vogus and Taylor (2018) have stressed the need to relate to theories from the field of organizational science using validated constructs such as diversity climate, psychological safety, and inclusive leadership. From an organizational perspective, SDT can also address the style of management most adaptive for employees with ASD in terms of autonomy support (Gillet et al. 2013), or other significant social variables that promote employment outcomes and well-being, such as keeping an open and explicit channel of communication with the employee to support long-term work motivation and stability (Scott et al. 2019).

Alongside the advancement of empirical knowledge, practical implications can be suggested based on the issues discussed in this commentary. The so-called conflict between the strength-based approach focusing on special interests and SDT focusing on need satisfaction, can mirror the possible tension between a rights-based and a needsbased perspective. Whereas the former argues that the labor market should accept neurodiversity, and objects to medical labeling, the latter embraces accommodation to needs and supports and evidence-based practice (Ravet 2011). We suggest that an integrative approach, taking into account these different, sometimes contradicting considerations, could promote optimal employment outcomes, and preserve long-term motivation. An integrative approach is particularly essential considering the heterogeneous profiles characterizing ASD, varying in symptom severity, cognitive abilities, and co-occurring conditions. Both strengths and support needs

should be considered, aiming for optimal employment integration (Bury et al. 2018).

Following the emphasis of SDT on the individual being an active, self-determined agent in his life, practical implications have relevance first and foremost for the person with ASD seeking employment. Information about the complex characteristics of work, and the possible discrepancies between special interests and a paying job, should be shared with the clients seeking the aid of career counseling services. Clear information can help develop realistic expectations regarding employment. Moreover, special interests can serve as a starting point for an examination of employment options with the aim of generalizing from them to related employment fields (Grandin and Duffy 2008; Bross and Travers 2017). Vocational counsellors can help clients understand the skills that are reflected in their special interest activities and translate those skills to a wider variety of possible jobs (Rochat and Armengol 2018). The finding that most adults with ASD had more than one special interest (Grove et al. 2018) give hope that some leeway for negotiation with the client regarding which of his interests can be practically associated with a paid job is possible. In case of discrepancies between interests and possible applicable jobs, other motives to work can be established such as an opportunity to preserve a steady social environment, achieving independence and establishing a feeling of competence and self-esteem. Maintaining an open channel of communication through the counselling process can help clients make an informed decision and practice compromise and flexibility when faced with dilemmas. Investing in a special interest as a hobby is another way to lead to personal benefits (Grove et al. 2018), even if reasons such as those mentioned above prevent them from materializing in the occupational world.

Along with adults with ASD, other stakeholders have an important role in nurturing employment success (Nicholas et al. 2018). Families of adults with ASD often continue to play an important part in the adult's life (Taylor and Seltzer 2011; Cadman et al. 2012). Differences in perspectives can surface in the period of emerging adulthood (Van Hees et al. 2018) which may affect the process of vocational choice. Parents may have strong opinions, whether positive or negative, regarding their child's abilities and special interests (Winter-Messiers 2007). These can affect expectations regarding the desirable vocational path. Hopes of finding a profession that reflects special interests, or criticism of this engagement, can both impact vocational choices. In some cases, considerations and priorities of the parents might stand in contrast with those of the adult with ASD. Standardized evaluations of abilities and job market demands that are shared with both client and parents can help narrow down these possible gaps. Promoting open communication between the client, the parents and the



vocational counselor, can contribute to the counselling process, offering insights and supporting decisions.

As for the employer, factors promoting success and the determinants of needs that boost motivation (e.g. support of peers and superiors to promote relatedness) and the feeling of autonomy at work should be taken into consideration (Pfeiffer et al. 2018). At the same time, it is fundamental that the employer is aware, sympathetic, and fully understands the needs and limitations of adults with ASD. To better monitor the employee's need satisfaction—employers should keep an open channel of communication with their employees and encourage them to express their needs and worries. Changes in job characteristic should be considered together. This is important even when these changes are considered positive, such as a promotion to a higher ranked position that requires new skills (e.g., managing others' work or expanding areas of responsibility). It is important to bear in mind that a step forward from the employer's point of view, could be a source of stress to the employee with ASD, or reduce the feeling of competence, leading to detrimental occupational and emotional effects.

To conclude, the employment of adults with ASD is a relatively new field of research, which requires more input. Suggested approaches such as matching special interests with jobs may be more useful when considered under a wider theoretical lens. Here, we suggested SDT as a theoretical framework, which could prove useful for the understanding of the needs of employees with ASD and offer ways to support them. Further basic research has a promising potential to enhance the understanding of underlying mechanisms, predicting successful employment, and improving vocational prospects.

Acknowledgments We are grateful to all our vocatioal counselling clients with ASD, whose experiences inspired this work.

Author Contributions YG wrote the manuscript. YG and OG conceptualized the commentary and revised it, according to comments by EG. All authors commented on the final manuscript and approved it.

Funding This study has been supported by a graduate research grant to Yael Goldfarb from the Organization for Autism Research.

Compliance with Ethical Standards

Conflict of interest All authors declare they have no conflict of interests.

Ethical Approval This article does not contain any studies with human participants performed by any of the authors.

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