Use of Social Narratives as an Evidence-Based Practice to Support Employment of Young Adults with Autism Spectrum Disorders: A Practitioner's Guide

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Abstract

The statistical data reports that current unemployment rates for young adults with an Autism Spectrum Disorder (ASD) in the United States is bleak. In 2004, Hurlbutt and Chalmers noted that difficulties obtaining and keeping employment are many times connected to issues involving social interactions and communication skills rather than performing specific job skills. Research from Wehman, et al. (2012) recently noted that students with ASD with access to intensive strategy training have more employment potential than previously realized. In addition, Klin, Volkmar and Sparrow (2000) note that there is a need to explicitly teach social skills to enhance the chance of employability. The purpose of this article is to give teachers, service providers, parents, job coaches and/or employers practical evidence-based strategies in the use of social narratives to support employment for young adults with an ASD.

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The Centers for Disease Control and Prevention (CDC) currently list the prevalence for a child to be born with autism as one out of sixty-eight live births (2014). This disorder impacts all races, ethnicities, and economic groups. The increase in prevalence data indicates an increase in the number of students requiring specific transition programming at the secondary level of school to prepare them for employment (Shattuck et al., 2012). To develop appropriate interventions for individuals with Autism Spectrum Disorders (ASD) and prepare them for work, practitioners need to know which interventions have a positive evidence base for effectiveness.

Students with disabilities account for 13% of the total population of all students educated in public schools in the United States (National Center for Educational Statistics [NCES], 2015). Of this percentage of students with disabilities, 8% are students identified as having an ASD. An ASD is a pervasive neurodevelopmental disorder characterized by difficulties with communication, social interactions, and repetitive and restricted behaviors. These challenges cause significant impairment in social and occupational areas of functioning (Mayo Clinic, 2013). White, Keonig, and Scahill (2007) add to the definition by revealing that social impairments extend across all individuals on the Autism spectrum, regardless of their level of language and cognitive functioning.

The participation rate of employment for people ages 16 to 25 with disabilities is 32.7% as compared to same age peers whose participation rate is 56% (Bureau of Labor Statistics [BLS],

2013). Based on findings from a report from the National Longitudinal Transition Study-2 (Newman, Wagner, Cameto, & Knokey, 2009), youth with an ASD have a lower rate of employment when compared to others with any other type of disability with the exclusion of an intellectual disability. This could be clarified by the explanation that young adults with ASD struggle to exhibit appropriate social skills across settings (Mayo Clinic, 2013). Lorenz, Frischling, Cuadros, and Heinitz (2016) reveal that social problems are a main barrier to successful employment.

Lorenz et al. (2016) added to the Mahwood and Howlin (1999) study that raised concerns with social challenges that include an absence of social understanding, lack of personal space, an excess of or reduced amount of talking, and an over-reliance on supervisors as just some of the social concerns impacting employment. Howlin and Yates (1999) identify possible work place skills that require good social skills such as initiating a conversation, asking purposeful questions, and interacting with colleagues and supervisors. Attainment of these skills requires explicit instructions and frequent reminders to coach the adolescent through the social situation.

ASD and Post School Outcomes
According to Shattuck et al., (2012) high school graduates with an ASD had the highest risk of staying home instead of participating in additional post-secondary education or employment during the first two years after high school. Youth with an ASD are at great risk for struggling to participate in work and school after leaving high school. Wehman, et al. (2012) report that the number of those being identified with ASD is growing, creating a greater need to prepare these students and their families for meaningful post-secondary employment opportunities. This increasing number means special education professionals need strategies to help these students leave public education ready with the skills needed to gain and maintain employment.

Unfortunately, young adults with ASD face a variety of challenges both in seeking and keeping a job (Shattuck et al., 2012). One of the challenges includes confusion during the hiring process. Job interviews require specific social skills that are difficult for adolescents with ASD. Due to a lack of understanding of social cues, or rules, people on the Autism spectrum often face challenges when having to respond to social behavior and engage in social interactions. Social difficulties are a significant barrier to successful employment for people with ASD (Lorenz et al. 2016). Chiang, Cheung, Li, and Tsai (2013) confirmed this research by examining 830 cases of secondary school graduates who were on the spectrum, and they discovered that those with poor social skills were significantly less likely to be employed. For those securing a job, remain obstacles in navigating employment settings which can be taxing physical, social, and sensory environments. Also, in 2012, Richards found that many employers do not have adequate personnel to provide individualized supports to those who might need it. Moreover, employers simply are not aware of the level or kinds of support needed for an employee with ASD (Richards, 2012).

Evidence-Based Practices
As young adults transition from school to work, teachers and job coaches must provide evidence-based practices (EBP) to prepare the students for the challenges of employment. The National Professional Development Center (NPDC, 2013) on ASD and the National Autism Center (NAC, 2015) have identified a variety of EBPs that have been shown to be effective for teaching social

skills to students with ASD;m. These EBPs met a set of quality indicators for research. The EBPs are applicable to students with an ASD aged 14-22 years. The EBPS must also show an improvement in a functional skill (NPDC, 2013). The lack of social skills is a defining characteristic of an ASD. Due to a lack of understanding of social cues or rules, people on the autism spectrum often face challenges when having to respond to social behavior and engage in social interactions. Social narratives were identified as an evidence-based intervention.

Social narratives (SN) are interventions that describe social situations by stressing pertinent cues and offering examples of appropriate responding (NPDC, 2013). SN can promote appropriate social interactions and also help to break complex situations into smaller steps for students. SN have been shown to be effective with transitions, new activities, and daily routines (NAC, 2016). SN can teach new social skills and encourage individuals to regulate their behavior through the use of narratives or scripts. SN can be written for various situations to guide the individual with ASD toward appropriate behaviors or responses (NPDC, 2013).

SN with Secondary Students
Although there is a wealth of research showing evidence of positive effects for younger children, there are only a handful of studies that have involved the use of social narratives with teens or adults. Cihak, Kildare, Smith, McMahon, and Quinn-Brown (2012) completed a study involving four teens who participated in a brief functional analysis and a video Social Stories™ intervention to remediate attention-seeking and task-avoidance behaviors. Results indicated that matching video Social Stories™ to specific functions of behaviors increased the students' task-engagement behaviors in the general education classroom. In addition, teachers, as well as participating students, reported positive social acceptability of the intervention (Cihak, et al., 2012). Klin, Volkmar and Sparrow (2000) talk about the importance of adolescents developing an appreciation of social expectations associated with a given setting and to attach the appropriate set of behaviors to that setting.

In addition, Samuels and Stansfield (2012) examined the use of social stories with four adults with social impairments. Each adult was involved in two Social Story™ interventions. Results from the intervention indicated that all target behaviors showed a positive change during at least one phase of the study. The use of SN had a positive effect on improving social interactions in the adults and this research helped to identify SN as an EBP (Samuels & Stansfield, 2012).

Implementing Social Narratives
SN are interventions that describe a social situation in detail by highlighting cues and giving appropriate examples or responses. The purpose is to help learners adjust to changes in routine and adapt behaviors or to teach specific social skills. Narratives should be individualized based on the employee's needs. Collet-Klingenberg and Franzone (2008) identified skills to address with social narratives on the job site. These skills could be behavior difficulties, personal hygiene, social skills, and effective communication skills, i.e., asking for help. As with implementation of any intervention, the interventionist must first identify the behavior, and then collect baseline data by direct observations. After reviewing the data, establish a measurable goal. This information will lead to identification of an EBP to implement (Collet-Klingenberg & Franzone, 2008).

Once it has been identified that the implementation of an EBP of SN could be helpful, then decide which SN skill to implement. The NPDC (2013) identifies three areas under the practice of social narratives with an evidence-base. These are social scripts, social stories™, and power cards. Social scripts can be used to teach social skills, reduce challenging behavior, help cope with change, and teach new routines. Social scripts provide pre-taught language to assist a young adult in a very specific situation (Kamps et al., 2002). An example would be providing needed language support in a job setting to deal with a confusing scenario, such as asking for help from another employee or a supervisor.

Social stories™ were developed by Gray over twenty years ago as a tool to help individuals with ASD better understand the distinctions of interpersonal communication so that they can relate more successfully and appropriately. The social stories™ are individualized short stories used as a teaching tool to describe a challenging situation in terms of relevant social cues, perspectives, and accepted responses (Gray, 2000). The social story™ is not intended to be a list of appropriate behaviors, but a story to encourage better behaviors and should be written on the young adult's level and apply to a specific vocational behavior (Gray, 2000).

The third strategy in the EBPs of SN includes the usage of power cards. In 2001, Gagnon introduced power cards as a visual aid to support a social skill and incorporates a young adult's special interest to teach appropriate social interaction. Power cards use the young adult's special interest to describe rules and behavioral expectations of a social situation. The Power Card has two parts: a brief story scene and a small card with rules outlining the appropriate behavior. If the young adult idolizes a particular sports star, the story would have an example of the sports star performing the appropriate behavior. Pictures on both the story and the card can be used to support the message (Gagnon, 2001).

Intervention Steps
The following steps will assist teachers to better implement the intervention with fidelity.
1. Develop the narrative. Be sure to personalize it to the learner's specific need. The presentation should be matched to the learner's academic skill level. Pictures, visuals, audio, or video can be used to increase comprehension.
2. Identify the settings, times, and/or situations to use the narrative.
3. Introduce the narrative individually with an explanation of the narrative. Have the learner read it and discuss the key concepts to learn. Role play a possible situation in which the narrative could be used. Have the learner practice the narrative. Prompt and reinforce as necessary.
4. Monitor the use by collecting data. If progress is noted, then continue the narrative. If no progress is observed, check for fidelity of implementation and check the learner's comprehension. Revise if needed.
5. Work on generalization by practicing the target skill in new settings or with new partners. After the adolescent is able to generalize the skill across settings, time, and people, then the narrative can be faded.

Practitioners must remember that the research to practice gap is often blamed on poor implementation. Best practice indicates 1) following the above implementation checklist 2) collecting data daily 3) noting the target skill, and then commenting and planning for each step.

Example of Social Script

> When I don't understand something at work, I will quietly walk to my boss and ask him for help. Here are some words that I might use.
>
> I need help.
>
> I do not understand what to do.
>
> May I ask a question about work?

Example of Social Story™

> Sometimes I get angry when my job at work changes.
> The boss usually tells me before the job changes.
> Sometimes the boss cannot tell me before the change.
> I should ask the boss or another worker what to do if I am confused about the new task instead of yelling.
> I will try to understand and respect what the boss or co-worker says.
> Jobs can be changed, and it is okay to complete a different job.
> When the job or task changes, I will do the new job.

Example of a Power Card

> WWE wrestler, Steve Austin wants me to remember these 2 things.
> 1. When someone enters the store, I will look at him in the face area and say, "Hello or welcome."
> 2. I will ask the person, "Can I help you?"

We must acknowledge that an important component of an intervention program for individuals with ASD involves the need to promote effective communication and social competence. Explicit instructions in these areas is needed to help increase employability.   An effective transition plan would address social needs on the job site among students with ASD. Many adults struggle to get or keep a job due to weaknesses in being an effective conversational partner or adjusting to work situations. As special educators, we must act to improve the post-secondary employment outcomes for students with an ASD. As noted in the current research, many students with an ASD are capable of learning new skills to obtain and sustain employment so that they do not become just another discouraging statistic (Wehman, et al., 2012).

References

Bureau of Labor Statistics. (2013). Labor force current employment statistics. Retrieved from http://www.bls.gov/data/#employment

Centers for Disease Control. (2014). Retrieved from http://www.cdc.gov/ncbddd/autism/data.html

Chiang, H. M., Cheung, Y. K., Li, H., & Tsai, L. (2013). Factors associated with participation in employment for high school leavers with autism. *Journal of Autism and Developmental Disorders, 43*(8). 1832-1842. http://doi.10.1007/s10803-012-1734-2

Cihak, D. F., Kildare, L. K., Smith, C. C., McMahon, D. D., & Quinn-Brown, L. (2012). Using video Social Stories to increase task engagement for middle school students with autism spectrum disorders. *Behavior Modification*, *36*(3), 399-425. doi: 10.1177/0145445512442683

Collet-Klingenberg, L., & Franzone, E. (2008). *Overview of social narratives*. Madison, WI: University of Wisconsin, Waisman Center, The National Professional Development Center on ASD.

Gagnon, E. (2001). *The power card strategy: Using special interests to motivate children and youth with Asperger syndrome*. Shawnee Mission, KS: Autism Asperger Publishing Company.

Gray, C.A. (2000). *The New Social Story Book™*. Arlington, TX: Future Horizons.

Howlin, P., & Yates, R. (1999). The potential effectiveness of social skills groups for adults with autism. *Autism 3*(3). http://10.1177/1362361399003003007

Hurlbutt, K., & Chalmers, L. (2004). Employment and adults with Asperger syndrome. *Focus on Autism and Other Developmental Disabilities, 19*(4), 215-222.

Kamps, D., Royer, J., Dugan, E., Kravits, T., Gonzalez-Lopez, A., Garcia, G., Carnazzo, K., Morrison, L., & Kane, L.G. (2002). Peer training to facilitate social interaction for elementary students with autism and their peers. *Exceptional Children 68*(2). 173-187. http://doi.10.1177/001440280206300202.

Klin, A., Volkmar, F. R., & Sparrow, S. S. (2000). *Asperger Syndrome*. New York, NY: Guilford Press.

Lorenz, T., Frischling, C., Cuadros, R., & Heinitz, K. (2016). Autism and overcoming job barriers: Comparing job-related barriers and possible solutions in an outside of autism-specific employment. PLoS ONE (1). http://dx.doi.org/10.137.1/journal.pone.0147040

Mahwood, L., & Howlin, P. (1999). The outcome of a supported employment scheme for high-functioning adults with autism or Asperberger syndrome. *Autism 3*(3). http://doi:10.1177/1362361399003003003

Mayo Clinic. (2016). *Definition of ASD*. Retrieved from http://www.mayoclinic.org/diseases-conditions/spectrum-disorder/basics/definition/con-20021148

National Autism Center. (2015). *National standards project, phase 2*. Retrieved from http://nationalautismcenter.org

National Center for Educational Statistics. (2015). *The Condition of Education*. Retrieved from https://nces.ed.gov/programs/coe/indicator_cgg.asp

National Professional Development Center for ASD. (2013). *Evidence-based practices*. Retrieved from http://www.autismpdc.unc.edu

Newman, L., Wagner, M., Cameto, R., & Knokey, A. (2009). *The post-high school outcomes of youth with disabilities up to 4 years after high school. A report from the National*

Longitudinal Transition Study-2 (U. S. Department of Education Report No. NCSER 2009-3017). Retrieved from www.ies.org

Richards, J. (2012). Examining the exclusion of employees with asperger's syndrome from the workplace. *Personnel Review, 4*(5), 630-646. dx.doi.org/10.1108/00483481211249148

Samuels, R., & Stansfield, J. (2012). The effectiveness of Social Stories to develop social interactions with adults with characteristics of autism spectrum disorder. *British Journal of Learning Disabilities*, *40*, 272-285. http://dx.doi.org/10.1111/j.1468-3156.2011.00706.x

Shattuck, P. T., Narendorf, S. C., Cooper, B., Sterzing, P. R., Wagner, M., & Taylor, J. L. (2012). *Pediatrics 129*. http://doi:10.1542/peds.2011-2864.epub2012

Wehman, P., Schall, C., McDonough, J., Molinelli, A., Riehle, E., Ham, W., & Thiss, W. (2012). Project SEARCH for youth with autism spectrum disorders: Increasing competitive employment on transition from high school. *Journal of Positive Behavior Interventions*, 1-12. http://dx.doi.org/10.1177/1098300712459760

White, S. W., Keonig, K., & Scahill, L. (2007). Social skills development in children with autism spectrum disorders: a review of intervention research. *Journal of Autism & Developmental Disorders, 37,* 1858-1868.

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