

The Voices of Parents: Post–High School Expectations, Priorities, and Concerns for Children With Intellectual and Developmental Disabilities

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Abstract

The expectations of parents can shape the post-school pathways of young people with intellectual and developmental disabilities (IDD). Yet little is known about how parents view the employment prospects and priorities of their sons and daughters after high school. We examined expectations, preferences, and concerns of 1,065 parents of children and youth with IDD (below age 22) related to outcomes after leaving high school. We found parents prioritized paid community employment over sheltered options, valued qualitative aspects of the workplace (e.g., personal fit and interaction opportunities) over common employment outcome metrics (e.g., pay and hours), and held substantial concerns about their child's future employment success. We found that multiple factors shaped parental expectations and the extent to which their daughters or sons accessed early career development experiences. We offer recommendations for research and practice aimed at raising expectations for and access to community employment for young people with IDD.

Keywords

transition, employment, expectations, families

Equipping students with disabilities for a good life after high school is a principal aim of special education. At the outset of the Individuals With Disabilities Education Improvement Act (IDEA) of 2004, this purpose is framed as preparing students with disabilities “for further education, employment, and independent living.” Yet for many young people with disabilities and their families, the outcomes they desire remain elusive. The gap between aspirations and outcomes is especially apparent among students with intellectual disability, autism, and multiple disabilities in the early years after high school (e.g., Carter, Austin, & Trainor, 2012) and throughout adulthood (e.g., Siperstein, Parker, & Drascher, 2013). Moreover, segregated workplaces are widespread, and little progress has been made toward expanding integrated employment opportunities in the community (Butterworth et al., 2015).

Parents may be among the most powerful forces shaping the employment-related experiences and outcomes of their daughters and sons with intellectual and developmental disabilities (IDD). The force of families has long been recognized by the inclusion of parent involvement as a basic principle of IDEA (Turnbull & Turnbull, 2015) and as a core component of every prominent transition framework (e.g., Kohler & Field, 2003; Test, Smith, & Carter, 2014).

Although parents are widely recognized as essential allies in attaining desired post-school outcomes, several aspects of their involvement warrant additional empirical attention.

First, parent expectations are among the strongest predictors of employment and other post-school outcomes for young people with IDD (e.g., Doren, Gau, & Lindstrom, 2012; Simeonsen & Neubert, 2013). For example, Carter et al. (2012) found that high school students with severe disabilities whose parents expected them to obtain post-school work were more than 3 times as likely to have a paid job in the community within 2 years after exiting high school than students whose parents did not hold such expectations. Recognizing that the pathway from expectation to outcome is complex, it may be that the expectations parents hold influence the types of early exposure and career-related experiences provided to their children with IDD. Although efforts have been made to document the expectations of

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these parents, such studies are limited in their focus on parents of adolescents, the specificity with which expectations are addressed, and their sample size. For example, Kraemer and Blacher (2001) asked 52 parents of young adults (ages 20–24) with IDD about ideal and realistic work and living arrangements. Powers, Geenen, and Powers (2009) surveyed approximately 86 parents of young people (ages 16–22) with IDD about the importance and occurrence of various transition activities. Because parent expectations may be formed long before their child enters high school and may change over time, additional research is needed to identify how parents of both children *and* youth view the importance and likelihood of future post-school outcomes. Likewise, policy in the United States is shifting from sheltered employment toward community-based jobs (Martinez, 2013). However, little is known about how parents prioritize these different employment pathways.

Given the strong influence parent expectations have on the post-school employment outcomes of young people with IDD, it is equally important to understand what factors shape these parental expectations. Child-related factors, such as gender, type and severity of disability, and presence of challenging behaviors, may influence parental views on the importance and likelihood of future employment. Indeed, each has been found to predict adult employment outcomes (Haber et al., 2015). Parent-related factors such as educational level, socio-economic status, race/ethnicity, geographic locale, knowledge of vocational supports, and work-related concerns may affect parents' visions of future employment for their children. School-related factors such as the employment-related expectations teachers hold or the extent to which they provide information to families may affect what parents know and think about the transition to employment (Carter, Austin, & Trainor, 2011). Finally, experiential factors such as the extent to which students have had an array of career-related experiences at home, in school, or in the community could shape what parents see as possible and preferable. We know of no large-scale studies that have examined the constellation of factors that prime parents to expect community employment for their daughter or son with IDD after high school.

Second, parents hold individual preferences and concerns that should be considered when addressing the transition to employment for young people with IDD. Although post-school employment is often treated as a dichotomous outcome (i.e., working or not working) within both research (Mazzotti et al., 2015) and policy (e.g., Indicator 14), jobs can vary widely in their core features (e.g., hours, pay, benefits, advancement opportunities, match with interests, level of integration). Likewise, the importance parents place on these aspects of future work may differ. Research addressing the priorities parents place on particular job features could help move conversations in the field beyond *whether* parents want their children to work and toward *which* types of jobs parents consider to be most desirable.

Conversely, the concerns parents hold about their child's participation in the workforce could temper their pursuit of employment opportunities. Additional research is needed to elucidate both aspects of parental perspectives.

Third, early and extensive involvement in career development experiences—within and beyond school—is advocated as an essential aspect of high-quality transition preparation (Test et al., 2014). Insights into how students with IDD are accessing these experiences come from studies focused on the school-sponsored activities provided to adolescents (e.g., Carter et al., 2011). Research addressing whether parents are involving their children with IDD in career development activities at home, at school, and in the community could provide a more complete picture of how young people with IDD are preparing for future careers across the age span. As community work experience is considered the most direct pathway to post-school employment (Carter et al., 2012; Simeonsen & Neubert, 2013), it is particularly important to understand (a) the extent to which students with IDD access these experiences and (b) the factors predicting such access.

The purpose of this study was to investigate the post-secondary expectations, priorities, and concerns parents have for their daughters or sons with IDD. We addressed the following research questions:

Research Question 1: How do parents evaluate the importance and likelihood of different post-secondary outcomes for their child?

Research Question 2: What factors predict parents' expectations for part- or full-time employment?

Research Question 3: How do parents assess the importance of potential job features?

Research Question 4: What concerns do parents hold regarding the future employment of their daughter or son?

Research Question 5: To what extent are their children accessing career development experiences at home, in school, and in the community?

Research Question 6: What factors predict access to hands-on work experiences during adolescence?

Our focus on parents of children from birth to age 21 reflects a recognition that expectations and priorities may be formed before their child enters high school and are shaped over time.

Method

Participants

Participants were 1,065 mothers, fathers, or other caregivers of children with IDD (all referred to as "parents"). To be included in the study, participants must have (a) had a child with a primary or secondary label of intellectual disability,

autism, or multiple disabilities below age 22 and (b) lived in the state of Tennessee. Most participants (86.4%) were mothers; 6.7% were fathers, 4.4% were grandparents, 1.6% were other relatives, and 0.9% were legal guardians not related to the child. Nearly one fifth were non-White (18.4%), and half (50.1%) had children who were eligible for free and reduced-price meals at school.

Most children were male (73.1%), with an average age of 12.1 years ($SD = 5.3$). When asked how parents would describe their child's level of disability, 73.6% selected mild/moderate, and 24.9% selected severe/profound. Most parents (79.8%) indicated that their child exhibited one or more of eight challenging behaviors in the last 6 months: unusual or repetitive behavior (51.6%), uncooperative behavior (48.9%), withdrawal or inattentive behavior (44.6%), disruptive (37.5%), socially offensive behavior (23.0%), destructive to property (22.5%), hurtful to others (21.3%), and hurtful to self (19.2%). Table 1 displays additional demographics.

Recruitment Procedures

Although the present article focuses on children and youth below age 22, we recruited widely more than 9 months to include parents of adults with IDD as part of a larger project aimed at understanding family expectations, concerns, and needs across the age span. We sought to achieve broad representation from a sample reflecting the ethnic, economic, and geographic diversity of families across the state. To this end, we contacted an array of disability- and family-focused organizations, networks, and listservs to identify those who had relationships with parents of children with IDD; created an extensive list of recruitment announcement options (e.g., fliers, listserv blurbs, personalized email invitations) that could be adapted by these partnering organizations; and also attended community events (e.g., state disability conference, Special Olympics, district transition fairs) with invitations and print copies of the survey.

A total of 131 organizations, groups, and networks extended study invitations or distributed on our behalf: area Special Olympics programs ($n = 22$), disability services providers ($n = 16$), individual autism support/advocacy groups ($n = 15$), other sports and recreation programs and camps ($n = 14$), state Arc chapters ($n = 10$), family support programs ($n = 10$), parent support groups ($n = 10$), Down syndrome support/advocacy groups ($n = 7$), faith-based ministries ($n = 7$), school-based extracurricular programs ($n = 6$), University Centers for Excellence in Developmental Disabilities projects ($n = 4$), employment services providers ($n = 3$), social services providers ($n = 3$), statewide advocacy organizations ($n = 2$), and other organizations ($n = 2$). Most organizations (82%, $n = 108$) recruited participants by sending announcements about the survey by email; others sent print invitations. Several organizations had sufficient information in their databases (i.e., age, disability categories) to send print

Table 1. Demographics of Participating Parents and Their Sons or Daughters With IDD.

Variables	<i>n</i> (%)
Parent race/ethnicity	
White (non-Hispanic)	869 (81.6)
Black/African American	134 (12.6)
Hispanic/Latino	60 (5.6)
Asian American	4 (0.4)
American Indian or Alaskan	7 (0.7)
Other	17 (1.6)
Not reported	1 (0.1)
Parent highest education level	
High school degree	165 (15.5)
Some college	248 (23.3)
Associate's degree	128 (12.0)
Bachelor's degree	244 (22.9)
Master's degree	164 (15.4)
Professional degree	32 (3.0)
Doctoral degree	27 (2.5)
None of the above	55 (5.2)
Not reported	2 (0.2)
Type of community	
Rural	412 (38.7)
Suburban	491 (46.1)
Urban	142 (13.3)
Not reported	20 (1.9)
Disability categories of their daughter or son ^a	
Autism	678 (63.7)
Deaf/blindness	4 (0.4)
Deafness	4 (0.4)
Developmental delay	241 (22.6)
Emotional disturbance	33 (3.1)
Functional delay	22 (2.1)
Hearing impairment	11 (1.0)
Gifted	17 (1.6)
Intellectual disability	324 (30.4)
Multiple disabilities	142 (13.3)
Orthopedic impairment	36 (3.4)
Other health impairment	44 (4.1)
Specific learning disability	38 (3.6)
Speech or language impairment	213 (20.0)
Traumatic brain injury	8 (0.1)
Visual impairment	16 (1.5)
No secondary category listed	232 (21.8)
Age of their daughter or son	
0–5 years	140 (13.1)
6–12 years	413 (38.8)
13–18 years	370 (34.7)
19–21 years	142 (13.3)
Functional skills rating of their daughter or son	
0–4	228 (21.4)
5–8	325 (30.5)
9–12	295 (27.7)
13–16	185 (17.4)
Not reported	32 (3.0)

Note. $N = 1,065$. IDD = intellectual and developmental disabilities.

^aPercentages total more than 100% because parents could indicate a primary and secondary disability category.

surveys to all families meeting eligibility criteria. Mail surveys included an invitation and reply envelope.

To reach parents of school-age children with IDD, we approached the special education departments of all 137 school districts in the state with a request to distribute to students and families who met our eligibility criteria. Fifty-three school districts agreed to send home either (a) fliers about the study or (b) print surveys along with postage-paid reply envelopes. To reach parents in Spanish-speaking communities, we partnered with statewide and regional multicultural support groups for families of children with IDD.

We took steps to promote a high return rate. First, surveys could be completed anonymously. Second, we randomly selected 50 participants to receive a \$25 gift card, requesting contact information on a separate survey. Third, we offered both print and online (i.e., REDCap platform; Harris et al., 2009) versions to capture a wide span of participants, including those without Internet access. Fourth, the survey could be completed in less than 30 min.

Measure

We developed a survey to (a) understand parent expectations, priorities, and concerns related to employment for their daughters or sons with disabilities and (b) learn about helpful resources in supporting the transition to adulthood and/or participation in community life. Drawing upon previous research on parental needs and expectations (e.g., Carter et al., 2012; Grigal & Neubert, 2004; Wagner, Newman, Cameto, Levine, & Marder, 2007), we crafted questions addressing the following: (a) expectations for life after high school, (b) employment priorities and potential concerns, (c) previous career-related experiences, (d) roles of schools, and (e) familiarity with and desire for transition-related resources. We asked 12 parents of children with disabilities to provide feedback on an early draft. The final survey—available in both print and online, as well as in English and Spanish—included six sections.

Child demographics. We asked respondents to provide demographic and disability-related information about their daughter or son. If they had more than one child with a disability, we requested that they select one. The demographic information included their child's age, gender, type of school, and primary and secondary special education category. We gauged disability severity in four ways. A functional abilities measure consisted of four items related to how well the child performed independently: reading and understanding common signs, telling time on a clock with hands, counting change, and looking up phone numbers and using the telephone. Response options were 1 = *very well*, 2 = *pretty well*, 3 = *not very well*, and 4 = *not at all well*. The total score was a sum of the four items, with a higher score reflecting greater functional deficits. This measure was developed for the National Longitudinal Transition Study–2. Second, we asked about perceived disability level: mild,

moderate, severe, or profound. Third, we measured the frequency of challenging behaviors by asking parents which of eight behaviors their child had exhibited in the last 6 months (see “Participants” section). Finally, we asked how often their child had significant health problems requiring surgery or hospitalization, had substantial problems getting around (e.g., walking, running), and were involved in activities in the community. Responses were provided on a 5-point Likert-type scale (1 = *never*, 2 = *rarely*, 3 = *sometimes*, 4 = *often*, 5 = *almost always*).

Post-high school expectations. We listed 13 common post-high school experiences (see Table 2), and asked respondents to think ahead to the first 2 years after their child finishes high school and rate the importance of these 13 common post-high school experiences. Responses were provided on a 4-point Likert-type scale (1 = *not at all important* to 4 = *very important*). These items were adapted from prior surveys of family expectations and transition (e.g., Kraemer & Blacher, 2001; Powers et al., 2009). We then asked respondents to rate how likely their daughter or son would be to have each of these 13 experiences. Responses were provided on a 4-point Likert-type scale (1 = *not at all likely* to 4 = *very likely*). Finally, we asked how familiar they were with “work, school, residential, and community activity options for [their] son or daughter after high school” (1 = *not at all familiar* to 4 = *very familiar*).

Employment goals and barriers. We asked respondents to rate the importance of 12 different aspects of a potential job (see Table 3) using a 4-point Likert-type scale (1 = *not at all important* to 4 = *very important*). We included an open-ended section to add other important aspects not already listed. Cronbach's alpha for these 12 items was .90. To explore the concerns parents held regarding their daughter or son finding success in the workplace, we asked respondents to rate the extent to which each of 14 factors (see Table 4) might deter their daughter or son from finding and maintaining a job. Ratings were provided using a 4-point Likert-type scale (1 = *not at all a concern* to 4 = *a major concern*). We included an open-ended section to add other concerns not already listed. Cronbach's alpha for these 14 items was .89. The final question asked parents to rate the likelihood they would seek help or ideas from each of six persons (i.e., a family member or relative, a friend, someone from their faith community, someone from the local school system, someone from a disability employment provider, someone from a local disability organization) when looking for a job for their child.

Previous employment-related experiences. We asked parents to indicate whether their daughter or son has previously participated in each of 16 experiences that could serve as preparation for the world of work (see Table 5). Response

Table 2. Parent Priorities and Expectations for Various Post-School Experiences.

Item	Importance ratings of parents (%)				Likelihood ratings of parents (%)				M (SD)	
	Not at all	A little	Somewhat	Very	M (SD)	Not at all	A little	Somewhat		Very
Employment										
Work in a <i>part-time</i> job in the community	7.7	10.3	26.1	53.6	3.3 (0.9)	14.8	19.0	30.8	30.9	2.8 (1.1)
Work in a <i>full-time</i> job in the community	23.4	11.5	21.1	41.9	2.8 (1.2)	30.8	20.3	25.8	18.6	2.3 (1.1)
Work in a <i>part-time</i> job in a sheltered workshop	29.2	19.2	25.1	21.9	2.4 (1.1)	31.2	26.4	23.8	12.9	2.2 (1.0)
Work in a <i>full-time</i> job in a sheltered workshop	36.7	18.9	23.0	17.1	2.2 (1.1)	38.1	25.9	20.1	9.8	2.0 (1.0)
Enlist in the military	86.2	4.8	3.0	2.2	1.2 (0.6)	83.2	5.6	2.9	23.5	1.2 (0.6)
Post-secondary education										
Attend a 2-year community college	31.9	12.9	19.3	33.3	2.6 (1.3)	37.4	17.7	22.5	17.9	2.2 (1.2)
Attend a 4-year college/university	37.5	12.9	15.0	32.3	2.4 (1.3)	45.7	17.2	17.0	15.3	2.0 (1.1)
Attend a vocational or technical school	16.2	26.3	24.1	30.6	2.6 (1.2)	33.4	20.7	25.6	14.9	2.2 (1.1)
Attend a post-secondary program for students with IDD	30.5	17.1	23.4	23.3	2.4 (1.3)	39.6	22.6	19.6	11.1	2.0 (1.1)
Residential settings										
Live at home with family members	13.6	19.7	25.7	38.2	2.9 (1.1)	6.5	9.9	21.3	58.2	3.3 (0.9)
Live in the community in a group home (with three or more others)	51.1	18.7	17.0	9.9	1.9 (1.0)	50.4	20.7	16.8	6.5	1.8 (0.9)
Live in the community with 1–2 other people	37.3	21.0	23.7	14.3	2.2 (1.1)	39.6	24.7	22.2	7.6	1.9 (0.9)
Live in the community independently with supports	24.2	12.0	21.5	40.5	2.8 (1.2)	36.8	20.0	23.1	13.9	2.2 (1.1)

Note. Percentages are based on the number of participants who completed the given item. IDD = intellectual and developmental disabilities.

Table 3. Parent Views on Important Features of a Future Job.

Item	Percentage of parents selecting rating				M (SD)
	Not at all important	A little important	Somewhat important	Very important	
A job that brings personal satisfaction	4.2	2.6	12.6	80.6	3.7 (0.7)
A match with my son or daughter's interest	7.0	3.2	15.2	74.6	3.6 (0.8)
Opportunities to interact with people	3.4	5.5	19.9	71.3	3.6 (0.7)
Opportunities to develop friendships	3.7	5.7	21.2	69.4	3.6 (0.8)
Access to supports at workplace	5.6	5.6	18.6	70.2	3.5 (0.8)
A workplace that employs people with and without disabilities	6.4	6.5	22.9	64.2	3.5 (0.9)
Availability of reliable transportation	8.6	8.3	19.6	63.6	3.4 (1.0)
Availability of health benefits	11.7	7.9	15.4	65.0	3.3 (1.0)
A flexible schedule	7.7	10.1	29.6	52.6	3.3 (0.9)
Opportunities for advancement	14.9	15.8	24.1	45.2	3.0 (1.1)
A high pay rate	23.3	15.7	25.2	35.8	2.7 (1.2)
A high number of working hours per week	30.8	22.2	31.1	15.9	2.3 (1.1)

Note. Percentages are based on the number of participants who completed the given item.

Table 4. Parental Concerns Regarding the Future Employment of Their Child.

Item	Percentage of parents selecting rating				M (SD)
	Not at all a concern	A minor concern	Somewhat concern	A major concern	
Social and communication skills	5.1	7.5	24.7	62.7	3.5 (0.8)
Ability to be hired by employers	6.3	7.3	23.0	63.3	3.4 (0.9)
Ability to apply and find a job	6.6	9.5	21.0	62.9	3.4 (0.9)
Opportunities for on-the-job support	4.9	9.4	26.7	59.0	3.4 (0.9)
Lack of accessibility to programs that support jobs	9.2	13.4	26.1	51.3	3.2 (1.0)
Safety on the job	8.6	18.8	24.3	48.4	3.1 (1.0)
Ability to perform the job	7.1	17.5	37.6	37.8	3.1 (0.9)
Job's negative impact on benefits and insurance	14.2	18.2	21.4	46.2	3.0 (1.1)
Challenging behaviors	13.2	19.7	28.9	38.2	2.9 (1.1)
Lack of accessible transportation	18.8	20.0	21.9	39.4	2.8 (1.1)
Motivation to work	19.4	19.3	28.9	32.5	2.8 (1.1)
Work shifts affecting our family's schedule	21.2	23.7	22.6	32.5	2.7 (1.1)
Health issues	37.4	24.6	17.1	21.0	2.2 (1.2)
Hygiene	41.0	24.1	17.6	17.4	2.1 (1.1)

Note. Percentages are based on the number of participants who completed the given item.

options included *yes*, *no*, and *I don't know or remember*. As opportunities for these types of experiences can vary by age, respondents could mark "no" if their child was too young to participate in an activity. We provided space for parents to write in other activities not listed. Cronbach's alpha for these 16 items was .83.

Role of schools. We asked parents to rate the extent to which teachers and staff at their child's school (a) discussed their child's employment goals at individualized education program (IEP) meetings, (b) provided their child strong employment training, (c) expected their child to eventually get a job

in the community, (d) provided them with information about their child's employment options for life after high school, and (e) connected them to other community agencies and groups that could help their child prepare for adulthood. Responses were provided on a 4-point Likert-type scale (1 = *never* to 4 = *often*); we also included an option of *I don't know*. Cronbach's alpha for these five items was .85. Respondents could skip this section if their child was not in school.

Family demographics. We asked respondents to provide demographic information about themselves and their family, including their relationship to the child with a disability

Table 5. Early Work-Related Experiences of Children Ages 6 to 22.

Experience	Percentage of parents who indicated whether their child had this experience		
	Yes	No	Unsure/don't remember
Helped with chores at home	86.3	13.2	0.5
Participated in an out-of-school community activity	62.5	36.5	1.0
Talked about future career goals	47.8	51.0	1.2
Learned about different careers or professions	45.0	52.2	2.8
Helped manage some of his or her own money	44.1	55.3	0.7
Participated in an extracurricular activity at school	43.0	55.4	1.6
Did volunteering or service learning	26.8	71.4	1.8
Participated in job training at school	14.9	82.6	2.5
Took a vocational class at school	11.7	85.0	3.4
Attended a job or career fair	9.0	88.0	2.9
Searched for a job	6.9	91.8	1.3
Had a <i>paid</i> after-school or weekend job	6.2	92.5	1.3
Had a <i>paid</i> summer job	6.2	92.5	1.3
Had an <i>unpaid</i> after-school or weekend job	4.5	94.2	1.3
Participated in an internship or apprenticeship	4.4	94.1	1.5
Had an <i>unpaid</i> summer job	3.8	94.8	1.4

Note. Percentages are based on the number of participants who completed the given item.

(e.g., mother, father, grandparent), whether the child lives in the same home, the total number of children in household, their marital status, their race/ethnicity, their highest degree or level of formal education, their child's eligibility for free or reduced-price meals at school, and whether their description of their community is rural, suburban, or urban. We also asked parents for their zip code to track our reach across the state.

Data Analysis Procedures

To determine how parents evaluated the importance and likelihood of different post-secondary outcomes for their daughter or son with a disability, we used descriptive statistics to summarize ratings across each outcome (see Table 2). We also conducted a repeated-measures ANOVA to determine whether there were any mean differences among the way parents evaluated the following four employment outcomes: (a) part-time employment, (b) full-time employment, (c) part-time sheltered workshop, and (d) full-time sheltered workshop. We used descriptive statistics to summarize ratings across 11 important job features (see Table 3) and 14 potential job concerns (see Table 4). All percentages and summary statistics were calculated based on the number of participants who completed the given item rather than the whole sample.

We computed Pearson correlation coefficients to examine associations between the predictor variable and dependent variables (see Table 6). We then conducted two linear regression analyses with the full sample ($N = 1,065$) and one logistic regression analysis with the truncated sample

of only working-age youth ages 14 to 21 ($n = 452$). In all models, we examined factors contributing to community-based employment expectations and early work experiences (see Table 7). For our two linear regression models, the outcome variables were the expectations of full- and part-time employment experiences. All explanatory variables included the following: male (1 = *male*, 0 = *female*), child age (range zero to 21), autism (1 = *autism*, 0 = *no autism*), functional abilities (possible range four to 16; higher scores reflect high levels of functional abilities), behaviors (1 = *presence of any challenging behavior in previous 6 months*, 0 = *no challenging behaviors in previous 6 months*), teacher expectations (possible range one to four; higher scores reflect high levels of teacher expectations), employment information from school (possible range one to four; higher scores reflect high frequency of school providing information), familiarity with vocational supports (possible range one to four; higher scores reflect more familiarity with supports and services available), job concerns (possible range one to 14; higher scores reflect more items rated as *somewhat* or *major concern*), parent education (possible range one to eight, high school to doctoral or professional degree; higher scores reflect more advanced levels of parent education), free or reduced-price meals (1 = *eligible for free or reduced-price meals at school*, 0 = *not eligible*), parent race/ethnicity (1 = *White*; 0 = *non-White*), rural (1 = *lives in a rural community*, 0 = *does not live in a rural community*), early work experiences (1 = *had any type of early work experience*, for example, paid or unpaid after-school, weekend, or summer job; 0 = *did not have an early work experience*), home experiences (possible range one to four; higher

Table 6. Correlation Among Predictor and Outcome Variables.

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
1. Expectations of part-time work	3.26	0.99	—																			
2. Expectations of full-time work	2.83	1.21	.59**	—																		
3. Early work experiences	0.10	0.30	.12**	.06*	—																	
4. Male	0.27	0.44	-.11**	-.11**	-.06*	—																
5. Child age	12.07	5.30	-.07*	-.24**	.31**	.05	—															
6. Autism	0.55	0.50	.14**	.24**	.03	-.23**	-.15**	—														
7. Functional abilities	8.48	3.74	.24*	.23**	.31**	-.09**	.36**	.23**	—													
8. Behaviors	0.20	0.40	-.08**	-.05	.02	.12**	.05	-.24**	-.02	—												
9. Teacher expectations	2.72	1.51	.12**	.09**	.12**	-.00	.09**	-.00	.20**	-.02	—											
10. Employment information from schools	1.74	1.15	.08*	.03	.11**	.04	.22**	-.10**	.13**	.00	.43**	—										
11. Familiarity with vocational supports	1.57	0.85	.03	-.07*	.15**	.04	.25**	-.13**	.11**	.02	.11**	-.25**	—									
12. Job concerns	9.42	3.62	.16**	.03	-.04	-.07*	.06	.08**	-.15**	-.19**	-.06*	.04	-.01	—								
13. Parent education	3.44	1.87	.02	.02	.06*	-.02	.01	-.00	.02	.03	.03	.00	.03	-.02	—							
14. Eligibility for free/reduced-price meals	0.42	0.49	.01	.04	-.05	.01	-.09**	-.04	-.11**	.07*	-.09**	.01	-.01	.11**	-.19**	—						
15. White	0.82	0.39	-.04	-.02	-.01	-.01	.03	.01	.07*	.11**	.09**	.04	-.10**	-.12**	-.09**	-.23**	—					
16. Rural	0.39	0.49	-.01	.08*	.02	.03	.00	-.05	-.01	-.02	-.07*	.00	-.05	.00	-.15**	.15**	.21**	—				
17. Home experiences	2.05	1.43	.25**	.19**	.30**	-.07*	.34**	.13**	.68**	-.03	.22**	.11**	.15**	-.14**	.01	-.09**	.10**	-.02	—			
18. School experiences	0.62	0.81	.15**	-.00	.29*	-.01	.43**	-.08*	.36**	.07*	.19**	.21**	.26**	-.07*	.02	-.14**	.06*	-.07*	-.41**	—		
19. Community experiences	0.94	0.91	.13**	.00	.35**	-.01	.39**	-.04	.39**	.01	.21**	.16**	.25**	-.12**	.10**	-.16**	.07*	-.07*	.51**	.55	—	

Note. N = 1,065. Male (1 = male); autism (1 = autism); free or reduced meals (1 = eligible for free/reduced meals); White (1 = White); rural (1 = rural).

*p < .05. **p < .01.

Table 7. Summary of Regression Analyses for Part- or Full-Time Work Expectations and Early Work Experiences.

Variable	Part-time work expectations (N = 1,065)		Full-time work expectations (N = 1,065)		Early work experiences (n = 452)		
	B ^a	SE ^b	B	SE	B	SE	Exp (B)
Intercept	2.53**	0.20	2.41**	0.24	-9.60**	1.81	0.00
Male	-0.15*	0.07	-0.11	0.08	-0.43	0.37	0.65
Child age	-0.05**	0.01	-0.09**	0.01	0.27**	0.07	1.31
Autism	-0.01	0.07	0.18*	0.09	0.31	0.34	1.36
Functional abilities	0.05**	0.01	0.09**	0.01	0.14*	0.06	1.15
Behaviors	-0.07	0.09	-0.01	0.10	-0.05	0.38	0.92
Teacher expectations	0.03	0.02	0.03	0.03	0.19	0.14	1.21
Employment information from school	0.03	0.03	0.06	0.04	-0.15	0.15	0.86
Familiarity with vocational supports	0.01	0.04	-0.01	0.05	-0.03	0.17	0.98
Job concerns	0.06**	0.01	0.03*	0.01	0.01	0.05	1.01
Parent education	0.01	0.02	0.03	0.02	0.00	0.09	1.00
Eligibility for free or reduced-price meals	0.04	0.07	0.09	0.08	0.07	0.35	1.01
White	-0.16	0.11	-0.18	0.11	-0.54	0.44	0.58
Rural	0.03	0.07	0.22*	0.08	0.79*	0.32	2.21
Early work experiences	0.15	0.11	0.26*	0.13	—	—	—
Home experiences	0.11**	0.03	0.09*	0.04	0.30*	0.15	1.34
School experiences	0.15**	0.05	0.05	0.06	0.19	0.17	1.20
Community experiences	0.00	0.04	-0.03	0.05	0.53**	0.17	1.69
R ²	.17		.21				
Adjusted R ²	.15		.20				
F	10.28**		13.77**				
Pseudo R ²					.20		
Nagelkerke R ²					.32		
Wald χ^2					88.71**		

^aUnstandardized regression coefficient. ^bStandard error of unstandardized coefficient.

* $p < .05$ (two-tailed test). ** $p < .01$ (two-tailed test).

scores reflect participation in a higher number of work-related home experiences, that is, helping with chores, helping to manage money, discussing future career goals with parents), school experiences (possible range one to four; higher scores reflect participation in a higher number of work-related school experiences, that is, learning about different careers or professions, taking vocational classes, participating in an extracurricular activity at school, participating in job training at school), and community experiences (possible range one to four; higher scores reflect participation in a higher number of work-related community experiences, that is, volunteering or service learning, attending a job or career fair, participating in an internship or apprenticeship, searching for a job).

The final analysis used the explanatory variable of early work experiences as an outcome variable for a logistic regression because we were interested in which variables could be predictors for transition-aged youth to access a paid after-school or weekend job, unpaid after-school or

weekend job, paid summer job, or unpaid summer job. We truncated our sample to include only parents whose daughter or son were of ages 14 to 21 ($n = 452$) and ran a logistic regression with the outcome as the binary variable representing whether or not they had any work experience. All of the independent variables mirrored those we used as predictors for the full- and part-time expectations, with the exception of the early work experiences variable itself.

We examined the unstandardized regression coefficients, standard errors, and significance of each predictor variable in the model to isolate the predictive value and weight of each variable, holding other variables in the model constant. The unstandardized regression coefficients represent the amount of predicted change of the dependent variable (expectations of full- or part-time work) given an increase of one unit of the predictor variable. Unstandardized regression coefficients are expressed in the scale units of the predictor of interest. A negative regression coefficient represents a negative relationship between the predictor and

dependent variables. Standard errors measure how precisely the model estimates the unstandardized coefficient's value. The smaller the standard error, the more precise the estimate.

Results

How Do Parents Evaluate the Importance and Likelihood of Post-Secondary Experiences?

Ratings of the importance and likelihood of 13 post-high school experiences are shown in Table 2. Among all post-school options, the highest ratings of importance were found for part-time community employment ($M = 3.3$, $SD = 0.9$), with 79.7% of parents considering this option to be somewhat or very important. By contrast, full-time community employment was important to 63.0% of parents, part-time sheltered employment was important to 47.0% of parents, and full-time sheltered employment was important to 40.1% of parents. However, part- and full-time community employment options were considered to be somewhat likely or very likely by just 61.7% and 44.4% of parents, respectively. Part- and full-time sheltered employment settings were considered likely by 36.7% and 30.0% of parents, respectively.

A repeated-measures ANOVA revealed that mean employment expectations differed significantly among these four options, based on the Greenhouse–Geisser correction for violation of sphericity, $F(1.892, 1891.971) = 295.988$, $p < .0005$. Rank order means indicated that expectations for employment were ordered from part-time community employment, full-time community employment, part-time sheltered workshop, and full-time sheltered workshop.

How Do Parents Assess the Importance of Potential Job Features?

Parents' views on important features of a future job are summarized in Table 3, arranged from most to least important by mean. The items with the highest importance ratings were as follows: *a job that brings personal satisfaction* ($M = 3.7$, $SD = 0.7$), *a match with my son or daughter's interest* ($M = 3.6$, $SD = 0.8$), and *opportunities to interact with people* ($M = 3.6$, $SD = 0.7$). Conversely, the lowest means were found in *opportunities for advancement* ($M = 3.0$, $SD = 1.1$), *a high pay rate* ($M = 2.7$, $SD = 1.2$), and *a high number of working hours per week* ($M = 2.3$, $SD = 1.1$).

What Concerns Do Parents Hold Regarding the Employment of Their Child?

Parental concerns regarding the future employment of their child are summarized in Table 4, arranged by mean. The items reflecting greatest levels of concern were as follows:

social and communication skills ($M = 3.5$, $SD = 0.8$), *ability to be hired by employers* ($M = 3.4$, $SD = 0.9$), and *ability to apply and find a job* ($M = 3.4$, $SD = 0.9$). Parents reported the following items with the lowest levels of concerns: *health issues* ($M = 2.2$, $SD = 1.2$) and *hygiene* ($M = 2.1$, $SD = 1.1$).

What Factors Predict Parents' Expectations of Community Employment?

Correlations among all variables are displayed in Table 6. Part-time work expectations had the strongest positive correlations with the variables of autism, teacher expectations, early work experiences, and job concerns. Child age, being male, and the presence of challenging behaviors were negatively correlated with these expectations. Similarly, full-time work expectations had the strongest positive correlation with autism, teacher expectations, and early work experiences; the strongest negative correlations were with child age, male gender, and familiarity with vocational supports. We used these correlations to construct a regression analysis to predict parents' expectations of community-based employment experiences. A summary of the unstandardized regression coefficients and standard errors of each of the 17 predictor variables for these two models is provided in Table 7. The first regression model accounted for 17% of the variance in parents' expectations of part-time employment, $R^2 = .17$, $F(17, 865) = 10.28$, $p < .001$. Higher expectations of part-time employment were predicted for daughters, children of lower ages, children with greater functional abilities, more job-related concerns, and more prior work-related experiences at home and school. The second regression model accounted for 21% of the variance in parents' expectations of full-time employment, $R^2 = .21$, $F(17, 864) = 13.77$, $p < .001$. Higher expectations of full-time employment were predicted by having a younger child, having a child with autism, having a child with greater functional abilities, holding more job-related concerns, living in a rural community, having a child who accessed early hands-on work experiences, and having a child with more home experiences.

To What Extent Do Children and Youth Participate in Early Work Experiences?

Table 5 reports children's previous participation in a variety of home, school, community, and early work experiences that could prepare them for future careers. Home experiences were the most common, with 86.3% indicating that their daughter or son had *helped with chores at home* and 47.8% *talked about future career goals*. School experiences varied widely—43.0% of parents indicated that their child had participated in an extracurricular activity at school, whereas only 14.9% participated in job training at school.

Employment experiences were the least common experiences—6.2% had either a *paid after-school or weekend job* or *summer job*, 4.5% had an *unpaid after-school or weekend job*, and 3.8% had an *unpaid summer job*.

What Factors Predict Early Work Experiences?

Among the subset of transition-age youth, having an early work experience was significantly correlated with multiple factors (see Table 6). Positive associations included expectations of full- and part-time work, functional abilities, teacher expectations, employment information provided by schools, familiarity with vocational supports, and having career-related experiences at home and in the community. Negative associations were linked to having a son.

We used early work experiences as an outcome variable to conduct a logistic regression to identify predictors of the occurrence of early work experiences for transition-aged youth. We used all other explanatory variables as the linear regression models. A summary of the unstandardized regression coefficients, standard errors, and odds ratios of each of the 16 predictor variables is provided in Table 7. A test of the full model against a constant-only model was statistically significant, demonstrating that these predictors contributed meaningfully to the likelihood of early work experiences ($\chi^2 = 88.71, p < .001$ with $df = 16$). Nagelkerke's R^2 of .320 indicated a somewhat strong relationship between this set of variables and having early work experiences. Specifically, older age, higher functional abilities, living in a rural community, and having more home and community work-related experiences were statistically strong predictors of higher likelihood of early work experiences.

Discussion

Improving the post-school outcomes of young people with disabilities requires careful consideration and clear understanding of the perspectives of parents on employment-related goals. We explored the work-related expectations, priorities, and concerns of a large, diverse sample of parents of children and youth with IDD. Although any individual parent is likely to hold unique views on this aspect of transition preparation, our aggregated findings provide several important insights into parent engagement related to the transition to adulthood.

First, we found that a large proportion of parents placed considerable importance on part- or full-time employment in the community for their daughter or son in the early years after leaving high school. Indeed, more than twice as many parents considered community employment to be important than sheltered employment. Although parents clearly hold mixed views, their emphasis on community employment outcomes aligns with broader calls to expand integrated options nationally (Martinez, 2013). At the same time, we

were struck by the gap between the *importance* placed on community employment outcomes and the *likelihood* with which parents felt these outcomes would actually materialize—79.7% versus 61.7% for full-time and 63.0% versus 44.4% for part-time (cf. Kraemer & Blacher, 2001). What might contribute to this gap? Perhaps the constellation of concerns parents identified in this study tempered somewhat their visions of what is possible for their child. For example, more than half of parents identified major concerns regarding their child's future employment in five areas: social and communication skills, ability to be hired, ability to apply and find a job, opportunities for on-the-job support, and lack of accessibility to programs that support jobs. Perhaps their limited familiarity with vocational options and supports reduced their ability to envision their daughter or son working. Additional research is needed to explore in greater depth these and other possibilities.

Second, when asked to identify important features of a future job for their daughter or son, the highest importance ratings addressed more qualitative dimensions of the workplace, such as having a job that brings personal satisfaction, matches their child's interests, provides opportunities for interaction, and allows for friendship development. These responses stand in some contrast with the metrics most often used to document post-secondary employment success in the literature: rate of pay, number of hours, advancement opportunities, and availability of benefits (e.g., Butterfield et al., 2015; Mazzotti et al., 2015). Indeed, these latter features were attributed the lowest levels of importance by our overall sample. Efforts to connect young people with IDD to a job characterized by its fit, satisfaction, inclusiveness, and supportiveness may be more attractive to parents than pursuing a job based only on its availability.

Third, given the strong empirical link between early work experiences and post-school employment (Carter et al., 2012), we were struck by the paucity of actual paid or unpaid employment for students during middle and high school. Only 36.2% of young people with IDD ages 14 to 21 had *any* of these experiences. Calls to increase access to paid employment experiences before leaving high school have been plentiful but have yet to penetrate practice (Carter et al., 2011; Test et al., 2014). However, many parents did indicate that their children contributed to household responsibilities (e.g., helping with chores), participated in extracurricular or community activities, learned or conversed about future careers, and received vocational classes or training in school. Involvement in these developmentally appropriate career exploration activities are also recommended as avenues for preparing students with IDD for future employment across the age span (Carter et al., 2012). Moreover, our regression findings suggest that participation in these activities may play a role in shaping parental expectations toward future employment for their daughter or son with IDD.

Fourth, we identified several factors associated with higher parental expectations for full- and part-time employment in the community after high school. In both models, career-related activities occurring at home were predictive of higher ratings of the importance of future employment. Likewise, future employment was considered more important when parents had younger children or children with higher functional abilities. Interestingly, parents who reported more job-related concerns actually attributed higher importance to future employment. In other areas, predictors differed somewhat across part- and full-time employment outcomes. For example, when young people with IDD had some type of hands-on early work experience (e.g., after-school job, summer job, internship), their parents placed more importance on future full-time work; when young people had some type of school-affiliated career activities, their parents attributed more importance to future part-time work. Parents of children with autism held higher expectations for full-time work than did parents of children with intellectual disability. This may be due to an emergence of many autism-specific advocacy groups and organizations that emphasize could contribute to raising parents' expectations of what is possible for their son or daughter with autism. Finally, we were surprised that few parent demographic factors (e.g., race/ethnicity, level of education, family income) were significant in our regression models. Collectively, these findings offer an important reminder that expectations regarding different post-school experiences may be shaped by multiple factors and in many ways.

Implications for Practice

Findings from this study have important implications for educational teams charged with providing transition services and supports for students with IDD. First, the responses of parents varied widely across all areas in this study. Although some instructive patterns emerged within our aggregated findings, no two parents were likely to hold exactly the same expectations, priorities, or concerns for their children with IDD. Transition teams should consider how best to solicit from individual families' information about the expectations they personally hold, the outcomes they prioritize, and the concerns they have. Transition services and supports can then be strategically aligned to address these individualized perspectives.

Second, the experiences, instruction, and information offered through schools can play an important role in equipping students with IDD for future employment. Schools should consider carefully how best to deliver services and supports that both equip students for the workplace and raise

parents' expectations for post-school employment. Narrowing our sample only to parents of transition-age youth (ages 14 to 21), we found that 61% said educators sometimes or often discussed their child's employment goals at IEP meetings, 17% said educators sometimes or often provided strong employment training, 32% said educators sometimes or often provided information about employment options for life after high school, and 30% said educators sometimes or often connected them to other community agencies or groups. Such data highlight missed opportunities for schools to address employment and support parents with resources.

Third, the job-related concerns identified by parents represent potential points for intervention. For example, parents identified their child's social and communication skills as potential barriers to employment. Incorporating into the school day interventions addressing social skills and interpersonal interaction could help address this potential barrier (Test et al., 2014). Similarly, parents worried about the willingness of employers to hire their child, the availability of on-the-job support, and the accessibility of employment programs. Developing strong school linkages with both employers and adult service providers could address some of these barriers and help (Luecking & Luecking, 2015).

Limitations and Future Research

Several limitations of this study suggest pathways for future research. First, although our study involved a large sample size, including parents from almost every county in our state (95%), our findings are limited to a distinct geographic locale. The demographics of participating parents mirror those of our whole state but may not necessarily be reflective of other states or a nationwide sample. In the future, researchers should systematically replicate these findings by querying parents in other states or regions. Just as employment services and outcomes vary widely by state, so might parent expectations and the factors that shape them.

Second, although parents provided important insights into their perspectives on future employment, we only asked one person per family to provide their views within a cross-sectional design. Future studies should explore how different members of a family (including the student with IDD) or transition planning team converge and diverge in their perspectives on the importance of post-school outcomes. Because post-school expectations are likely to shift as children age, longitudinal studies exploring how these expectations evolve are sorely needed.

Third, the manner in which we designed our survey questions elicited important insights into parental expectations and priorities but did not allow respondents to

rank order their priorities and concerns. Thus, a particular parent may have indicated that both sheltered and community employment options were important to them. Although we are able to identify those areas our whole sample rated more highly, we cannot consistently determine which outcomes, job features, or concerns parents ranked more highly than others. This limitation could be readily addressed in future studies by offering multiple response options.

Fourth, our regression models accounted for only modest amounts of variance in predicting the importance placed on part- and full-time community employment (.17 and .21, respectively). We see this study as a launching point for researchers who might incorporate other information in their studies to pinpoint additional factors that may affect parent expectations.

The expectations of parents are among the most powerful influences on the post-school employment pathways of young people with IDD. Understanding both the priorities and worries families hold can provide important insights to practitioners and policy makers charged with designing services and supports that meet the needs of young people and their families. We found that most parents envisioned a future of integrated employment for their daughters and sons. Yet pursuit of this valued post-school outcome is accompanied by real concerns and uneven early career experiences. We encourage both researchers and practitioners to aim their work at identifying effective pathways for both raising aspirations and bridging the divide between expectations and outcomes.

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