

Employment outcomes and support needs of Michigan Project SEARCH graduates with intellectual and developmental disabilities: A mixed-method study

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Abstract.

BACKGROUND: Project SEARCH is a one-year school-to-work transition program that prepares students with intellectual and developmental disabilities (IDD) for competitive employment.

OBJECTIVE: The current study used a mixed-method explanatory design to examine Project SEARCH graduates' overall experience of transitioning from Project SEARCH to employment, their long-term employment outcomes, and their support needs during and after the program.

METHOD: Parents of 31 Project SEARCH graduates completed an online survey regarding the graduates' outcomes and 9 parents agreed to participate in a follow-up interview.

RESULTS: Respondents reported positive employment outcomes for 24 of the Project SEARCH graduates (77.4% employed after Project SEARCH), primarily in the customer service industry.

CONCLUSION: The graduates were satisfied with their employment but also experienced difficulties and a need for additional employment preparation and support after Project SEARCH.

Keywords: Employment, vocational rehabilitation, transition, support needs, intellectual and developmental disabilities

1. Introduction

Compared to 63.7% of individuals without disabilities, only 19.1% of individuals with disabilities

were employed in 2021 (Bureau of Labor and Statistics, 2022). Obtaining and maintaining meaningful employment is even more challenging for individuals with intellectual and neurodevelopmental disabilities (IDD; e.g., intellectual disability, autism spectrum disorder [ASD], learning disabilities, attention deficit hyperactivity disorder [ADHD]; Zablotsky et al., 2019) who face additional employment barriers due to poor vocational preparation, behavioral challenges, social skills deficits, and an overall negative

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perception and attitude toward IDD (Chen et al., 2015; Hartnett et al., 2011; Kocman et al., 2018). As a result, according to the National Core Indicator Survey, only 20.2% of adults with IDD were included in integrated, paid employment (Hiersteiner et al., 2018). The quality of employment for individuals with IDD is also well below that of individuals without disabilities, as they are frequently underemployed, work limited hours, earn lower wages, and are assigned responsibilities below their educational attainments (Bureau of Labor and Statistics, 2020; Butterworth & Migliore, 2015; Hendricks, 2010; Hiersteiner, 2016; Moore & Schelling, 2015; Taylor & Seltzer, 2011).

These high rates of under- and unemployment exist despite legislative and policy initiatives calling on schools and communities to better prepare students with IDD for employment. The Individuals with Disabilities Education Improvement Act (IDEIA; 2004) and the Workforce Innovation and Opportunity Act (WIOA; 2014) both place significant emphasis on the importance of transition planning and preparation during the secondary school years (beginning by at least age 16). Schools are expected to provide transition services that include instruction, related services, community experiences, and the development of employment and other post-school adult living objectives delivered by highly trained personnel (IDEIA, 2004). Further, these services should be provided through alternative, evidence-based programs or activities that enhance the choices available to eligible students (WIOA, 2014). In response, educational and vocational agencies across Michigan are working together to improve outcomes for transition-aged students with IDD, including funding the implementation of a nationally known school-to-work transition program, Project SEARCH.

Project SEARCH is a one-year intensive school-to-work transition program that actively collaborates with a school district, community business partner, and vocational rehabilitation service provider to prepare students with IDD for competitive employment (Daston et al., 2012; Wehman, 2012). Replicated in over 500 sites across the United States and internationally, Project SEARCH combines classroom instruction with relevant employability and independent living skills and real-life work experience through strategically planned internships that prepare students with IDD to attain integrated or competitive employment upon completion of the program (Daston et al., 2012; Wehman, 2012). Each Project SEARCH site comprises approximately 12 students

per cohort, who rotate through three 10–12-week unpaid internships at a community business partner. In practice, interns complete approximately 720 hours of hands-on internships learning vocational skills with the support of a skills trainer (i.e., job coach) and 180 hours of classroom time learning social, adaptive, and independent living skills for a total of approximately 900 hours in the community business setting (Daston et al., 2012).

According to the most recently released national Project SEARCH data, between 92% and 94% of participants successfully complete the program with 46%–67% of Project SEARCH graduates achieving competitive integrated employment of over 16 hours per week with a salary above minimum wage, usually within 3 to 6 months after completion of the program (Project SEARCH, 2021). From published research reports, there is variation of post-Project SEARCH employment outcomes ranging from approximately 50% (Kaehne, 2016) to 83% of participants (Christensen et al., 2015) achieving competitive integrated employment. Further, Wehman and colleagues (2017; 2020) have conducted a series of studies evaluating employment outcomes for students with autism spectrum disorders (ASD) who received Project SEARCH plus ASD Supports (e.g., using applied behavior analytic techniques to support learning; increasing specific social communication skills for workplace success) compared to students who received high school special education services as usual. These studies found that between 73.4% (2020) and 94% (2017) of participants with ASD who completed Project SEARCH plus ASD Supports achieved employment within one year of program completion (compared to 12% and 17% of students in the control groups, respectively). These data show promising employment outcomes especially when compared to the general employment rate for individuals with IDD who are traditionally placed at adult activity centers, sheltered workshops, or stay at home (Wehman et al., 2014, 2020).

Despite these recent monitoring and evaluation efforts that suggest promising employment outcomes for Project SEARCH participants, less is known about the experience of transitioning from Project SEARCH to employment, whether individuals with IDD felt prepared and supported for competitive employment following the 1-year preparation program, and whether they continued to be successful following the removal of the supports offered through Project SEARCH. Research that has evaluated other transition-to-work programs has shown that initial

impressive employment outcomes after completion of employment-based intervention programs do not guarantee long-term job retention. Specifically, employment rates consistently dropped at 12 and 18-month follow-up, with few graduates remaining employed at 3 to 5 years following high school exit (Luecking & Fabian, 2000; Noyes & Sax, 2004). Christensen et al. (2015) investigated the longitudinal outcomes of Project SEARCH graduates in upstate New York and reported that job retention tends to remain high with the rate of 82% at one year post exit; however, the rate showed a downward trend at each data collection interval and by 2 years post exit, only 44% of Project SEARCH graduates remained employed (Christensen et al., 2015).

Given the discouraging job retention rate of transition program graduates and limited research regarding the experiences and long-term outcomes after graduates of Project SEARCH exited the program, the current study evaluated the employment outcomes and support needs of individuals with IDD who completed Project SEARCH in Michigan. We had the following research questions: 1) What is the current employment status of Michigan-based Project SEARCH graduates and are they satisfied with their employment outcomes? 2) Were graduates adequately prepared for the transition from Project SEARCH and what was most helpful/most challenging during the transition? And 3) What additional supports would have been helpful during the transition from Project SEARCH to employment?

2. Method

2.1. Study design

A mixed-method explanatory design was used to examine Project SEARCH graduates' overall experience of transitioning from Project SEARCH to employment, their long-term employment outcomes, and their support needs during and after the program. A quantitative survey was sent to the parents of Project SEARCH graduates and all respondents were then invited to participate in a follow-up interview to gain further insight regarding their experiences.

2.2. Participants

A total of 79 parents of graduates initially clicked on the link to complete the survey, 58 (73%) consented to participate, and 31 completed the survey

(53.4%). All respondents were either the mother ($n=24$; 77.4%) or father ($n=7$; 22.6%) of the individual with IDD. Their education ranged from a high school diploma ($n=1$; 3.2%) to a doctoral or professional degree ($n=4$; 12.9%), with the majority reporting having earned a bachelor's degree ($n=10$; 32.3%).

The respondents reported on behalf of 31 individuals with IDD who graduated from a Project SEARCH site in Michigan. The majority of the graduates ($n=25$; 80.6%) were White and diagnosed as having at least two disabilities. The most common diagnosis among graduates was ASD ($n=15$; 48.4%). Most of the graduates ($n=28$; 90.3%) had either a special education certificate or high school diploma, whereas 3 reported some post-secondary education experience. Finally, nearly all graduates ($n=28$; 90.3%) were living with a parent or guardian at the time of the study (see Table 1 for additional details).

Nine parents who had responded to surveys about a Project SEARCH graduate agreed to participate in a follow-up semi-structured interview. These respondents reported about 8 graduates, as two parents were married and reported on the same graduate. They were between ages 49 and 63. The inclusion criteria were the following: (a) must be a parent/guardian of a Michigan-based Project SEARCH site graduate; (b) must have responded to surveys about the employment outcomes and support needs of a Project SEARCH graduate; and (c) must have indicated a willingness to participate in interviews through the provision of signed informed consent. See table 2 for additional information about the interview respondents.

2.3. Measures

2.3.1. Survey

The survey was developed by a research team comprised of graduate students, post-doctoral research fellows, and faculty members in rehabilitation counseling and special education. After several revisions, the survey was placed on REDCap, which is a secure web platform for building and managing surveys. The majority of questions included multiple-select or multiple-choice response options, with the option to also provide additional details or responses in a text box following each question.

The survey comprised four sections. In the first section, *Demographic and Other Participant Information*, participants were asked to provide information related to the graduate's age, gender,

Table 1
Project SEARCH graduate demographics and other information

		Frequency	Percentage (%)
Gender	Male	20	65.5
	Female	11	35.5
Birth year	Prior to 1985	1	3.2
	1990–1993	7	22.6
	1994–1997	12	38.7
	1998–2000	11	35.5
Race/ethnicity*	Caucasian	25	80.6
	Hispanic	2	6.5
	Asian & Pacific Islander	2	6.5
	Native/Indian American	2	6.5
Diagnosis*	ASD	15	48.4
	ID	8	25.8
	Down syndrome	3	9.7
	Developmental delay	10	32.3
	Learning disability	8	25.8
	Health condition	2	6.5
	ADHD	8	25.8
	Epilepsy	5	16.1
	Other	6	19.4
	Level of education	Special education certificate	14
High school diploma		14	45.2
Special education college program/post-secondary education program		2	6.5
Other		1	3.2
Current living arrangement		With parents/guardian	28
	Independent w/o support	1	3.2
	Group home	1	3.2
	Other	1	3.2
Year of Project SEARCH completion	2019	10	32.3
	2018	15	48.4
	2017	2	6.5
	2015	1	3.2
	2014	1	3.2
	2012	1	3.2

*Respondents could select more than 1 option.

Table 2
Interview respondent demographics and other information

Respondent	Respondent demographics	Graduate demographics	Graduate diagnosis
Lisa	White, 59-year-old mother	White, 24-year-old, male	Down Syndrome
Nora	White, 55-year-old adoptive mother	White, 24-year-old, female	Post-traumatic Stress Disorder, Attention Deficit and Hyperactivity Disorder, Reactive Attachment Disorder, Learning Disability, Cognitive Impairment
Sandy	White, 49-year-old mother	White, 23-year-old, male	Cognitive Impairment, Apraxia
Jenny	White, 62-year-old mother	White, 26-year-old, male	Down Syndrome
Sam	White, 54-year-old mother	Biracial, 21-year-old, female	Autism Spectrum Disorder, Bipolar Disorder
Alice	White, 56-year-old mother	White, 26-year-old, female	Cognitive Impairment
Yasmine	White, 63-year-old mother	White, 27-year-old, female	Down Syndrome
Todd	White, 56-year-old father	(same graduate as Yasmine)	
Jessy	White, 55-year-old adoptive mother	White, 23-year-old, male	Autism Spectrum Disorder

race, ethnicity, primary diagnosis, education, and year of Project SEARCH completion. Next, participants were asked if the graduate was currently employed, unemployed but previously employed, or

never employed. Branching logic was then used to display the second section, *Employment Outcomes* only for those who were currently or previously employed. This section asked participants about the

graduate's current or most recent job, including their hourly pay rate, average number of hours worked per week, length of employment, the job industry, and job duties. If the graduate had never been employed, the respondent did not complete this section. All participants then completed section three, *Transitioning from Project SEARCH*. This section asked questions about experiences with transitioning from Project SEARCH to employment, including the type of support the graduate received to find a job and start working, how prepared they felt to look for a job and start working, who helped them look for a job and start working, what went well during the transition and what challenges they encountered, and whether employment and onboarding plans were developed to support the transition. The final section, *Supports*, included questions about additional supports the graduate received or wished they had received during and after Project SEARCH (e.g., benefits counseling, job development and placement, soft skills training, job coaching, follow along and retention). Participants were asked to indicate who provided specific supports (e.g., Project SEARCH instructor, Project SEARCH skills trainer or other staff, job coach, vocational rehabilitation counselor, job developer, employment specialist, family), how long they received support, whether they were satisfied (1 = very dissatisfied; 5 = very satisfied) with the support they received, and whether the graduate felt prepared (1 = very unprepared; 5 = very prepared) after Project SEARCH to perform specific aspects of the job application and employment process (e.g., looking for a job, submitting an application, traveling to and from work independently, prioritizing work tasks, etc.). The survey ended with an additional question asking respondents if they were willing to participate in a follow-up interview with the researchers. It took approximately 30–45 minutes for respondents to complete the survey.

2.3.2. Semi-structured interview

The semi-structured interview guide included questions about the Project SEARCH graduate's employment and living status, preparedness for employment post-Project SEARCH, job satisfaction, transition process, support, and the impact of employment on the graduates (see Appendix). The researchers used Bronfenbrenner's bioecological theory to develop the interview guide. Bronfenbrenner's bioecological theory of human development posits that nested and interrelated systems around the person – microsystem (immediate environment), mesosystem

(interrelationships amongst microsystems, e.g., parental involvement in transition process), exosystem (indirect environment, e.g., parents' workplace), macrosystems (societal values) and chronosystem (changes over time) – affect the development of the individual at the biosystem (Bronfenbrenner & Morris 1998, 2006). All interviews were conducted by research assistants with whom the participants were not familiar and lasted about 1–1.5 hours. The study protocol and consent forms were approved by the Michigan State University research ethics board.

2.4. Procedures

After institutional review board approval, the survey was distributed via three different channels. First, an email with the link was sent to all teachers at Project SEARCH sites in Michigan and the teachers were asked to forward the survey invitation and link to previous Project SEARCH participants. Second, an email with the link was sent to vocational rehabilitation counselors and they were asked to share it with individuals they supported who had completed a Project SEARCH program in Michigan. And third, Michigan educational administrators were asked to distribute the survey to both parents/guardians and graduates of Project SEARCH in Michigan. Participation was completely voluntary, but upon completion of the survey respondents had an option to enter a drawing to win a \$50 Amazon gift card. The survey was active from September to November 2019.

Those who indicated they were interested in participating in an interview were scheduled to complete the interview either in person, over the phone, or via Zoom. After the interview was complete, the recording was sent to a third-party for transcription. Transcripts were then de-identified and pseudonyms were created for each participant to ensure confidentiality. All interview transcripts were sent back to participants for member checking.

2.5. Data analysis

The researchers used both quantitative and qualitative analyses. Quantitative analysis was used to examine the process of Project SEARCH, graduates' employment outcomes, and their support needs during and after Project SEARCH. Qualitative data were for collecting in-depth narratives from the parents of the graduates to further inform the quantitative findings.

2.5.1. Quantitative analysis

All the data were analyzed by frequency analysis using Statistical Package for Social Sciences (SPSS) 25.0 to identify parent and graduates' demographics, graduates' current work status, perceptions of Project SEARCH, their satisfaction with the program, and their preparedness for employment.

2.5.2. Qualitative analysis

We analyzed the data using Braun and Clarke (2006) thematic analysis wherein four research team members immersed themselves in the data by reading interview transcripts and open-ended responses on the surveys several times to identify final themes for the study. All transcripts were imported into NVivo 2012, a qualitative data management software program to assist in the organization of data for analysis. In the analysis process for interviews, all team members jointly coded two transcripts after which each team member independently coded one to three transcripts each. All research team members met on a weekly basis to compare, discuss, and modify initial codes, categories, and emerging themes until consensus was reached on the final themes central to the purpose of the study. All discrepancies were resolved during discussions. We employed triangulation (interviews and surveys) and peer-debriefing to ensure trustworthiness in the study (Barusch et al., 2011). All quotes from interviews are presented using pseudonyms for the respondents, whereas quotes from the surveys are presented with a brief description of the survey respondent.

2.5.3. Integration

Data integration involved merging the results from the quantitative survey and qualitative interviews so that comparisons could be made across experiences and responses. This integration allowed for a more complete understanding to emerge than what could have been provided by the quantitative or the qualitative results alone.

3. Results

3.1. Employment outcomes

First, responses to the survey and interview questions were examined to determine the overall employment outcomes for graduates of Michigan-based Project SEARCH sites. While the majority of respondents ($n = 24$; 77.4%) indicated that the grad-

uate was currently employed, two (6.5%) were not currently employed, and five (16.1%) respondents indicated the graduate never received a job after completing Project SEARCH. The primary industries of employment were food service ($n = 8$; 33.3%), hospitality ($n = 5$; 20.8%), and retail jobs ($n = 5$; 20.8%) and the main job tasks were cleaning, customer service, and restocking items. Table 3 displays the employment outcomes for the 24 Project SEARCH graduates who were employed at the time of the survey.

3.1.1. Impact of employment

Of the 24 graduates who were currently employed, 18 (75.0%) had the same job as when they completed Project SEARCH and six (25.0%) had a different job. Parents noted the joy, self-esteem, self-confidence, and independence graduates felt from being employed and most importantly, receiving paychecks. Lisa noted: "Like I said, I mean his self-esteem. He's so proud that he works for [business]. Um, and that he has a job, and you know, and he was ready to be done, you know, with high school. Yeah." Participants like Nora believed that her son is happy and proud of himself.

He would call his former classmates at school and say, yeah, I work at [business]. I mean, it was something that he was very proud of accomplishing and doing, you know, it was something important to him. So, I think, I don't think that can be downplayed because I think it's, we get our sense of worth so much from what we do. And so that part is very important. He liked the fact that he felt like he was earning money that he could spend on special things, right?

3.1.2. Satisfaction with employment

Parents indicated the graduates were satisfied with their jobs and the tasks they were expected to perform. Some parents acknowledged that graduates' work placement was a right fit for them and discussed their desire for graduates to stay at the job long-term. Sandy notes that "It is a good fit for him. My husband and I, we both think that he really enjoys it. I'd like him to stay, I think it really is great for him." Others expressed the graduates' satisfaction with aspects of their jobs including interacting with people and learning new skills. As Lisa commented "Oh, I think it helped her. I think she learned a lot of lessons about money management."

Table 3
Employment outcomes for the 24 employed graduates of Project SEARCH

		Frequency	Percentage (%)
Length of employment at current job	0–6 months	9	37.5
	7–12 months	3	12.5
	1–2 years	8	33.3
	2–3 years	2	8.3
	3–4 years	2	8.3
Number of hours worked per week	0–10 hours	6	26.1
	11–20 hours	9	39.1
	21–30	7	30.4
	More than 30	1	4.3
Type of employment	Volunteer/unpaid	1	4.2
	Sheltered vocational setting	1	4.2
	In community with supports	7	29.2
	In community without supports	13	54.2
Employment industry	Food service	8	33.3
	Hospitality	5	20.8
	Retail	5	20.8
	Other	6	25
Primary job tasks	Cleaning	13	54.2
	Customer service	8	33.3
	Restocking items	8	33.3
	Food service	6	25
	Other	2	8.3
Do the job tasks match with skills and interests?	Yes	20	83.3
	No	4	16.7
Do most employees at the job have disabilities?	Yes	2	8.3
	No	20	83.3
	Don't know	2	8.3
Is the graduate planning to stay at current job for the next year?	Yes	22	91.7
	No (looking for a new job)	2	8.3

Although graduates were mostly satisfied with their employment, parents also highlighted dissatisfaction with various aspects of the graduates' jobs. More specifically, some parents discussed the graduates' feelings of restriction at certain jobs, leading to increased levels of anxiety. This sentiment is well expressed by Lisa:

Well, she complained when they would put her in venues that were, um... that fueled her anxiety. So, I guess there were some venues that were slower or slower paced that she preferred to work in. Um, so she would, she would usually on the way to work, she would say, 'Oh, I hope I get to work at [place]...' It's because the workplace was so constricted, the space, she told me she just felt like the walls were closing in on her.

It is noteworthy that in cases where the parent reported the challenges graduates faced at work, they also reported that efforts were made to improve the situation. As Lisa continued, "Anyway, they moved her to another venue, another, um, like dorm for a little while. And she did not like working there at all.

So, she, we were able to get her back into [building]. She liked [building] a little better."

3.1.3. Preparedness for employment

Finally, respondents indicated that the graduates had learned the skills they needed for their current job during their time at Project SEARCH and most ($n=20$; 83.3%) of the graduates' job tasks matched their skills and interests. Specifically, during Project SEARCH more than 50% of the graduates learned skills they needed to be successful on the job, such as following instructions ($n=21$; 87.5%); interpersonal skills ($n=18$; 75%); time management ($n=18$; 75%); problem solving skills ($n=17$; 70.8%); organization and planning skills ($n=16$; 66.7%); flexibility at work ($n=15$; 62.5%); basic computer skills ($n=13$; 54.2%); and clerical skills ($n=12$; 50%). Overall, 84.6% of respondents felt the graduate was prepared to perform job tasks independently. Jenny noted significant improvements in her graduate's transportation skills as well as problem solving skills: "She can troubleshoot; she was able to troubleshoot when the bus was late, and she could call [bus system] and

ask them how long it's going to be. And um, if they can't understand her, she calls me and then I call them. But she's, she's the, she initiates that conversation." Another parent, Sam, commented "Mmm, I was surprised that he was doing mass transit by himself".

Parents also noted that the graduates developed an increased level of confidence, independence, discipline, accountability, and work ethic. For example, Alice said, "I think she's, she's more confident in herself. She knows what it's like to be in the working world and the routine of that. And yeah, I think it makes her more confident." Sandy noted, "But, um, so he has done more, like, with cooking at home and taking some self-initiative with, like, grooming and self-care and, um, you know, purchasing things." Subsequently, participants like Sandy concluded that Project SEARCH is a viable program for graduates' successful transition to employment and independent living.

Lisa said "She always, you know, went to work and always showed up on time. You know, she was never late for work. I think that it's good that she can say that she had a job and held a job for, what is it now, uh, six, seven months." Furthermore, regarding work ethic, many parents further explained that even in instances where graduates were late, they were thoughtful to inform supervisors ahead of time. As Yasmine reported:

She's more responsible as an employee. She texts them to let them know that she will be late. So if she has a day off coming up and she knows, like for example, last week she had Monday off and her last, she works Monday through Thursday and on Thursday before she left work, she made a point to tell her supervisor that she wouldn't be there the following Monday. So, I thought, 'Oh, she gets it'.

3.2. Transitioning from Project SEARCH to employment

Next, responses to surveys and interviews were examined to better understand the experience of transitioning from Project SEARCH to community-based employment. Regardless of their employment outcome, most ($n = 24$; 77.4%) of the respondents felt the graduate was prepared (35.5%) or very prepared (41.9%) for the transition from Project SEARCH to employment. Several respondents acknowledged that graduates experienced a smooth transition; as Jenny commented: "I thought it was very smooth. I mean,

Table 4
Number and percent of respondents to indicate which aspects went well during the graduate's transition from Project SEARCH to employment

	<i>n</i>	%
Preparation for interview	23	74.2
Consistent communication	19	61.3
Consistent work schedule	19	61.3
Supportive employer	17	54.8
Gets along with coworkers	15	48.4
Smooth hiring process	13	41.9
Access to transportation	10	32.3
Smooth on-boarding process	7	22.6
Adequate amount of job opening	6	19.4
Ease of obtaining accommodations	1	3.2
Other	2	6.5

it was extremely smooth, so, I mean, there wasn't any concerns." More specifically, respondents indicated they felt the graduate was somewhat prepared ($n = 11$; 39.5%) or very prepared ($n = 7$; 25.0%) to look for a job, somewhat prepared ($n = 11$; 39.5%) or very prepared ($n = 8$; 28.6%) to submit a job application, and somewhat prepared ($n = 13$; 46.4%) or very prepared ($n = 4$; 14.3%) to get a job that matched their skill set.

When asked what went well during the transition (see Table 4), most respondents indicated the graduate was well-prepared for the interview process ($n = 23$; 74.2%) and that there was consistent communication with those who were helping with the transition throughout the job search process ($n = 19$; 61.3%). As Todd clearly stated, "Well, we were blessed. The transition was very easy." Alice further elaborated on the transition experience:

I think Project SEARCH gave her so much great experience that was just perfect . . . perfect experience. I, if it wasn't for that, I don't, I don't know that, um, she probably wouldn't have had the maturity or confidence to find a job and I don't know how I would have been able to run around and check into all the possibilities . . . Project SEARCH and their counterparts took her out on all the interviews cause I couldn't have done that.

Other respondents did highlight some challenges with the transition from Project SEARCH to employment (see Table 5). When asked about challenges, over one-third of respondents ($n = 11$; 35.5%) indicated that transportation was a challenge. As Jessy noted:

Like what happened was I had to leave work early two days in a row to get her to job interviews and I didn't know until like an hour before the

Table 5
Challenges the graduate experienced when transitioning from Project SEARCH to employment

	<i>n</i>	%
Transportation	11	35.5
Lack of suitable job opening	8	25.8
Lack of job skills	5	16.1
Worry about losing social security benefits	5	16.1
Lack of communication skills	5	16.1
Lack of work-related soft skills	4	12.9
Inconsistent communication with those who were helping with transition	4	12.9
Lack of interview skills/preparation	3	9.7
Inconsistent work schedule	3	9.7
Issues with accommodations	3	9.7

job interview that she even had this interview and that nobody else could take her. So, um, you know, if there was a way to get her to these interviews where I don't have to take time off of work, you know what I'm saying?

In fact, 40.7% of respondents indicated that they did not feel their graduate was prepared to travel to and from work independently. A survey respondent of a 2019 graduate with ASD addressed these transportation challenges, writing, "Project SEARCH provided an excellent real work environment and training for various jobs. The number one thing that would help many families is TRANSPORTATION! If somehow Project SEARCH could work with the community to find transportation options – that would be amazing."

Others highlighted the challenges with onboarding after the graduate was hired. As one survey respondent of a 2018 graduate with an intellectual disability and apraxia wrote:

On-boarding was challenging with all the on-line trainings, passcodes, and emails so it would have been helpful to have accommodations or that communication be with the parent and the Project SEARCH graduate. We were lucky that we had a great HR person who was patient with us and that he was very responsive to our questions.

3.2.1. Transition supports

Most of the graduates received support from both Project SEARCH and vocational rehabilitation agency staff during the transition from Project SEARCH to community-based employment (see Table 6). Specifically, when looking for employment, the majority of graduates received support from the Project SEARCH classroom teacher (58.1%) and vocational rehabilitation counselor (64.5%). When

an employment plan was made ($n=18$; 58%), the Project SEARCH classroom teacher (88.9%) and skills trainer (55.6%) was often involved, with additional involvement from an employment specialist (33.3%). When an onboarding plan (i.e., submission of accommodations requests, employment application, necessary paperwork, company orientation and understanding company policy, and necessary training) was developed ($n=16$), this was often created with support from the Project SEARCH classroom teacher (56.3%) or the graduate's family (37.5%). Most parents emphasized receiving many benefits from Project SEARCH staff. Nora notes, "She could have stayed in touch with me a little more. But I thought we were offered a lot. I think we were lucky to have that". Yasmine stated, "The Project SEARCH staff was there with her, you know, they were kind of close and far, you know, and they were making sure that she transitioned to the buses okay."

On the other hand, some parents expressed frustration with certain aspects of the transition support. Parents commented about poor communication between support staff and services, discussing the need for a contact support person they could connect with whenever they encountered challenges once the graduate exited Project SEARCH. Jane explained:

Um, the job specialist... She didn't really just seem to know him. She didn't seem to have any idea of what job was really what job. I mean, and I had to hunt her down. She wasn't really in contact with me...Um, yeah, I mean that the whole, all those people involved in it, as I always say to people, Project SEARCH was perfect. It was the services that took over afterwards. That's where the problem was.

3.3. Post-employment experience

Finally, surveys and interviews were examined to describe the experience of graduates once they exited Project SEARCH and obtained employment. Whereas the experience transitioning from Project SEARCH to employment was mostly positive, respondents indicated a desire for additional supports once the graduate was employed and Project SEARCH was complete. When asked what could have been done differently, one survey respondent of a 2012 graduate with an unspecified disability wrote, "More post-job training. As soon as he graduated everybody disappeared. Crickets. Just crickets."

Table 6

Individuals who helped the graduate make an employment plan, look for a job, and develop an onboarding plan during the transition from Project SEARCH to employment

	Making an employment plan (n = 18)	Looking for a job (n = 31)	Making an onboarding plan (n = 16)
Project SEARCH teacher	16 (88.9%)	18 (58.1%)	9 (56.3%)
Project SEARCH skills trainer	10 (55.6%)	15 (48.5%)	6 (37.5%)
Other Project SEARCH staff	1 (5.6%)	12 (38.7%)	0 (0.0%)
VR staff	4 (22.2%)	20 (64.5%)	2 (12.5%)
Job developer	2 (11.1%)	0 (0.0%)	3 (18.5%)
Employment specialist	6 (33.3%)	0 (0.0%)	5 (31.3%)
Community mental health	0 (0.0%)	2 (6.5%)	0 (0.0%)
Graduate	11 (61.1%)	0 (0.0%)	4 (25.0%)
Family	11 (61.1%)	0 (0.0%)	7 (43.8%)
Employer	0 (0.0%)	0 (0.0%)	6 (37.5%)
Other	0 (0.0%)	3 (9.7%)	0 (0.0%)

3.3.1. Challenges after Project SEARCH

Although respondents indicated that they received many supports after Project SEARCH, such as job coaching ($n=22$; 71.0%) and prompts ($n=20$; 64.5%), others indicated a desire for benefits counseling ($n=10$; 32.3%), follow along and retention support ($n=7$; 22.6%), and support with developing workplace accommodations ($n=5$; 16.1%) or prompts ($n=3$; 9.7%). Of those who received benefits counseling ($n=5$), 3 were satisfied and 2 were not satisfied with the counseling they received. Regarding the need for follow along and retention support, one survey respondent of a 2018 graduate with ASD and an intellectual disability wrote:

After my son graduated from Project SEARCH, he received very little follow-up from his employment specialist. I asked for some job coaching on a few of the areas he was having difficulty and had a follow along for 1 day since he was hired 17 months ago. I was very disappointed in the lack of communication from the job coach at [retention organization] and currently he has a new job coach and I've yet to hear from them either. In order for these [adults] to be successful in their jobs, they need someone to help them and be their liaison when problems arise in the workforce... Since they are adults as a parent, I cannot intervene, so a job developer needs to be checking in at least once a month with their employer and doing in person visits with them at their workplace.

Others identified challenging work conditions, miscommunication between the graduates and co-workers, uncertainty about specific job tasks, and the absence of workplace accommodations. Regard-

ing challenging work conditions, some respondents indicated that employment increased graduates' anxiety and contributed to their physical exhaustion. For example, Alice commented about her daughter's job in a daycare:

She got to keep the kids from fighting and getting hurt. I guess sometimes some of the little kids can get mouthy or not listen. And that can be hard. So, she is learning how to handle them... Uh, I think it made her more anxious. At that job, but not necessarily work, but that, working that position, it raised her stress from day to day.

Many parents also reported instances of exhaustion during and after the graduates' work hours. Jenny commented "yeah, she'll say she's exhausted, but I don't know if working an hour and a half a day is that exhausting? But she says it makes her tired." Another parent, Todd, reported that his daughter was reluctant about going to work. "You know, there's days and she'll say, Oh, I wish I could retire, or you know, or this sucks, I have to go to work today."

Parents also noted that graduates were often misunderstood by co-workers as Lisa noted:

From what I can see... they probably struggled to understand him... um, the only real struggle that I've had is when, you know, they say, well, we talked to him about such and such, and I'm like, 'Okay. He didn't get that. I mean, you talked to him and you think that you had that discussion, but you really didn't.'

Parents also discussed challenges at work due to the absence of workplace accommodations, as Alice explained:

You know, inappropriate materials. I mean the first visual schedules were just too complicated, and they wanted him to record what he did or just give him the list and yeah. I mean, as I kept saying same steps every day, like don't ask for any evaluation . . . I felt like I was teaching college. Here are the levels of thinking. You're like at four, he's like, at one. So, [supervisor] asked him whether it needs to be dusted, just have him dust. Okay. We're not appraising and evaluating anything.

Many parents expressed frustration toward inexperienced job coaches who lacked the knowledge and expertise to support graduates at work. Jessie described a challenging experience with her graduates' job coach, "Job coaching when you don't know the job, that is a bad idea, and I know I insulted that poor job coach, but uh, I thought you, you're killing yourself here." Another respondent, Lisa, discussed their need for a job coach after Project SEARCH.

So, I assumed there was a job coach because we had been told there will be a job coach. And it wasn't until October that I realized there wasn't a job coach with him. So, the answers I was getting to things led me to believe that there was somebody and then turns out there wasn't. Um, so yeah, I think if we'd have had effective job coaching right away, things would have cruised through.

Although most graduates struggled to access either job coaches and/or the right supports for their specific needs, a few of the parents who were successful at obtaining job coaches acknowledged the support they provided to the graduates and their ability to complete the work tasks. For example, Lisa said, "Um, once we got the right job coach and a plan, it was four weeks in and out and Um, once there was effective coaching, life was great".

3.3.2. Overall satisfaction with the experience

Despite these challenges, respondents were overall positive and satisfied with their experience with Project SEARCH and the transition to community-based employment. Nora indicated that once workplace accommodations and supportive co-worker(s) and staff were there, it was beneficial to her graduate's adaptation, comfort, and overall success at work.

Um, the people at his work were helpful. Um, and they worked really hard at adapting the job, you know, breaking the job down into bits that they

could, um, you know, help him be successful at, um . . . calling you guys again at Project SEARCH was helpful.

Subsequently, many parents, like Jenny, were happy to recommend the program to others. She said,

I just know that we're so grateful for the program. You know, to be employed. So, I would strongly encourage anybody to come to this program, cause that's what you worry about, once they get out of high school and then what, yeah. And if we would have had to go out and try and find a job for [Graduate]. I mean, I felt very, I mean, it was so easy. We didn't have to do anything. So, I mean then and that's it. That's a huge stress that's lifted off of parents' shoulders who, you know, had to have a few other stressors in their life. So, um, it, it, it's wonderful.

4. Discussion

This study explored the current employment status of Michigan-based Project SEARCH graduates and satisfaction with the employment outcomes, as well as whether graduates were adequately prepared for the transition, what was most helpful and most challenging during the transition, and what additional supports would have been helpful during the transition from Project SEARCH to employment. Similar to previous findings of Project SEARCH and other work-based learning programs, the current study found a positive employment outcome for the majority of respondents, including a promising job retention rate and overall satisfaction with their employment (Bellman et al., 2014; Müller & VanGilder, 2014; Rutkowski et al., 2006; Schall et al., 2015; Scholl & Mooney, 2004; Wehman et al., 2012). The findings also support the extensive research suggesting that having accumulative prior work experiences strongly predicts a successful transition from school to employment among students with disabilities (Test et al., 2009; Wehman et al., 2014).

Although the results of the current study found that the majority of the graduates were able to obtain and maintain employment after exiting Project SEARCH, the jobs were often entry-level. Employment settings were limited to, for example, food service, hospitality, and retail jobs and the primary job tasks consisted of cleaning, customer service, and restocking items. The limited work environment of these Project SEARCH graduates is consistent with findings for other indi-

viduals with disabilities, as labor force characteristics indicate that compared to those without disabilities people with disabilities are more likely to be placed in sales or office occupations than those without disabilities (19.7% vs. 21.4%, respectively) and less likely to be in management and professional occupations (42.7% vs. 36.5%, respectively; Bureau of Labor Statistics, 2022). Some report that individuals with disabilities are more likely to obtain entry-level positions because employers assume these individuals have lower achievement and job skills (e.g., more advanced work would be too difficult), parents and teachers have low expectations for employment outcomes for individuals with disabilities, and because society holds stereotypes regarding the fit between a particular disability and a particular job (Cardoso et al., 2013; Colella & Varma, 1999; Lysaght et al., 2012; Moon et al., 2012). More recent studies, however, have identified a rising demand for people with disabilities in more advanced fields, such as science, technology, engineering, and mathematics (i.e., STEM) and found several predictors of developing students' interests and goal persistence in this field including social support, academic self-efficacy, and related field interests (Cardoso et al., 2013; Dutta et al., 2015). Project SEARCH-like transition programs can serve as an ancillary avenue working with school and disability agencies to provide information about newly arising career pathways and help individuals with IDD to develop the skills necessary to persistently pursue and obtain more advanced positions.

Regarding job preparedness, one of the major employment barriers for students with disabilities is inadequate preparation for employment-related soft skills (e.g., following instruction, punctuality, self-regulation, social skills, etc.) and almost 90% of job loss of individuals with disabilities has been attributed to their lack of preparedness in soft skills (Elksnin & Elksnin, 2001; Luecking & Luecking, 2015). It is encouraging, then, that more than half of the graduates in the current study were reported to have learned employment-related soft skills such as following instructions, interpersonal skills, time management, problem-solving skills, and organizing and planning skills during Project SEARCH. In addition to acquiring direct employment-related soft skills, parents of graduates also noted beneficial psychosocial outcomes such as increased confidence, independence, discipline, accountability, and work ethic. Didactic instruction regarding soft skills and consistent interaction with peers and worksite colleagues that occurred throughout Project SEARCH

may have contributed to the graduates' acquisition and application of soft skills in their new employment setting. Indeed, previous research supports the effectiveness of soft skill training for individuals with IDD, but the generalizability of these skills over time and across settings has not yet been examined (Clark et al., 2019; Lu et al., 2020; Sung et al., 2019).

When asked about employment and satisfaction with the Project SEARCH experience, most participants reported positive outcomes and identified several factors that may contribute to participants' satisfaction. For example, students' preparedness for employment, smooth transition from Project SEARCH to employment, and collaborative transition support (e.g., Project SEARCH classroom teacher, vocational rehabilitation counselor, skills trainer, and employment specialist) were considered positive experiences. Despite the positive efforts that were made for the Project SEARCH participants, unaddressed support needs were also highlighted. Specifically, respondents indicated a need for benefits counseling, follow-along and retention support, and support with developing workplace accommodations or prompts.

The finding that participants had the highest support need for benefits counseling, which is defined as a service to help individuals with disabilities and their families understand how employment and other life decisions impact their cash benefits (e.g., Social Security Income [SSI], Social Security Disability Insurance [SSDI]) and health insurance (e.g., Medicaid/Medicare; Association of People Supporting Employment, 2019) is concerning. Many individuals with disabilities are recipients of SSI/SSDI and Medicaid/Medicare and these benefits usually account for almost half of their total household income; many households of individuals with disabilities highly rely on these public benefits (Rupp et al., 2005). It is not surprising, then, that they expressed concerns about losing their disability benefits if they obtained a job and earned an increased income. It is critical for adults with IDD and their caregivers to understand how employment may impact benefits. This concern can be easily addressed by teaching individuals and their families about the work incentives built into Social Security Agency Programs and helping them fully understand how employment will impact their current benefits. Fortunately, state-federal vocational rehabilitation programs provide benefit counseling for the recipients of SSI/SSDI and Medicare/Medicaid, and thus, it should be easy for the Project SEARCH teacher or vocational rehabilitation counselor to make

a referral to an appropriate vocational rehabilitation counselor with expertise who may be able to provide this information and help individuals with disabilities and their families become more knowledgeable of the sustainability of their benefits (Iwanaga et al., 2020; Schlegelmilch et al., 2019).

The second highest reported need was for follow-along and retention support for graduates after Project SEARCH. Some respondents expressed psychological and physical exhaustion and others needed accommodations to support challenging work conditions. These findings are similar to previous research, which documented persistent and frequent anxious emotional states in individuals with IDD due to changes in routine and being with other people (DePape & Lindsay, 2016; Griffith et al., 2012; Portway & Johnson, 2005). Unfortunately, the respondents indicated that they did not receive enough follow-along and retention support to address these issues. These difficulties could be addressed both during Project SEARCH and through follow-up support by helping graduates to develop adaptive coping skills to manage anxiety and stress at their worksites and by connecting them with counseling support from mental health/vocational rehabilitation counselors.

As an additional component of follow-along and retention support, participants' positive or negative appraisals of job coaches are critical for graduates' successful adjustment and retention at work (Cheng et al., 2018; McInnes et al., 2010; Parsons et al., 2001). Despite the importance of job coach support, especially during the initial period of employment, job coaches rarely receive meaningful training or support for providing vocational skills instructions and effective support to students with disabilities (Gilson et al., 2021; Rogan & Held, 1999). In response to such emerging needs for well-trained job coaches, job coach training programs have recently been developed and evaluated (Brock et al., 2016; Gilson et al., 2021; Wenzel et al., 2022) and they have shown positive outcomes of job coaches' skills to teach vocational tasks to students with disabilities. These trainings for job coaches should be modified and extended to Project SEARCH-like transition programs and provided to job coach employers who can then equip their job coaches with appropriate skills and knowledge for providing the best services and supports to individuals with IDD.

Lastly, regarding work accommodations, individuals with IDD expressed some difficulty asking for workplace accommodations in the employment set-

tings, which is similar to previous finding that report difficulties asking for accommodations outside of the school system (Hutchinson et al., 2008; Lindsay et al., 2013). This finding reflects the need for curricular development in Project SEARCH to teach students about how and when to disclose their disability and ask for accommodations. Students should have the opportunity to practice these self-advocacy skills at their internship sites before exiting Project SEARCH. Previous literature also showed the important role of self-advocacy in predicting better adult outcomes among students with disabilities (Callahan et al., 2011; Caldwell, 2010; Getzel & Thoma, 2008) and specifically, Wehmeyer and Schwartz (1997) found a meaningful relationship between successful employment outcomes (e.g., being employed, earning competitive wages) and self-determination skills, noting self-advocacy as one of the key components of self-determination.

4.1. Limitations of the study

Despite the interesting findings, this study is not without limitations. First, the sample for both quantitative surveys and qualitative follow-up interviews was small. Subsequently, the results may not be fully representative of Michigan-based Project SEARCH graduates' experiences and outcomes. Second, the sample was primarily female and White. Working to recruit diverse participants in future research is essential to informing research results that can be applicable to diverse societies. Finally, although the research was initially conducted to collect information from both individuals with IDD and their parents, it was difficult to obtain responses from adults with IDD (i.e., few individuals completed the surveys). As a result, all data reported in this study is from parents/guardians of the Project SEARCH graduates with IDD who reported about the graduates' experiences. Future research should work toward the true inclusion of the voices of individuals with IDD as it enables an in-depth understanding of their experiences and ensures their voices are included.

5. Conclusion

Despite these limitations, this study has important implications for practice and research. Given the current and other previous study results supporting the effectiveness of students' prior work experience in predicting positive career prospects

(e.g., improved soft skills, career preparedness; Bellman et al., 2014; Müller & VanGilder, 2014) and outcomes (e.g., employment, job satisfaction; Southward & Kyzar, 2017; Test et al., 2009), school systems and rehabilitation agencies' should continue to promote and expand work-based learning programs such as Project SEARCH for students with IDD. These efforts would be well aligned with the federal initiative in enacting the WIOA (2014) which heavily emphasizes the importance of pre-employment transition services for students with disabilities.

Beyond transition programs, practitioners should consider conducting regular check-ins with graduates to identify additional employment support needs. In addition to on-the-job check-ins, the current study specified extra support needs, including benefit counseling, retention support, job coach support, and work-place accommodations. It should be noted that these support needs can be best met by mutual efforts from different partnerships such as sponsoring businesses, vocational rehabilitation counselors, school systems, families, and local IDD agencies (O'Day, 2009; Wehman et al., 2012). Thus, having regular collaborative communication channels with these partners would be worthy of being implemented. Indeed, interagency collaboration is an important predictor for successful transition planning for students with disabilities (Fabian et al., 2016; Test et al., 2009). Fabian et al. (2016) suggested instrumental and task-oriented collaboration (i.e., concrete planning on each agency's role and how much they contribute to a certain goal) as the desired form of interagency relationship instead of emphasizing the rhetorical meaning of collaboration and expecting synergistic effects.

Future research should explore how other Project SEARCH stakeholders (i.e., business partners, job coaches, vocational rehabilitation counselors, and local IDD agencies) report their experience of participation in Project SEARCH. For example, there have been several studies that explored the business partnerships' perspective in participating in work-based learning programs and including individuals with disabilities at their worksites (Bremer & Madzar, 1995; Müller et al., 2018; Riesen & Oertle, 2019). While most businesses were satisfied with the program and participants, several concerns were identified related to hiring/supervising individuals with IDD, such as quality control problems, reduced productivity, lack of support from a job coach/school personnel, and doubt about payback on their investment. Businesses suggested creating specific training agreements, pro-

viding employer training, and ensuring students' career preparation before job placement (Bremer & Madzar, 1995; Müller et al., 2018; Riesen & Oertle, 2019). Research to examine the extent to which Project SEARCH addresses these barriers to employment would also be beneficial. In a similar way, future studies can investigate the concerns and needs of other key stakeholders in participating in transition planning and training or working with students with IDD.

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Conflict of interest

The authors report no conflict of interest.

Ethics statement

The study was approved by the Institutional Review Boards of Michigan State University (STUDY00002415).

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Informed consent

All participants provided informed consent in accord with the ethical standards established by the Declaration of Helsinki.

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