Intervening early with youth with developmental disabilities using a tailored approach that considers each youth's unique strengths and interests will improve future employment outcomes for these youth.

# **IMPACT 2.0**

#### **Cohort 1 Report**

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THE UNIVERSITY OF BRITISH COLUMBIA

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## **Executive Summary**

The IMPACT project began in 2020 with eight member organizations of the BCEN (https://bcenetwork.ca) located in the Lower Mainland and the Southern Vancouver Island of BC. The University of British Columbia Canadian Institute for Inclusion and Citizenship (CIIC) conducted the arms-length evaluation of IMPACT (2020-2022). The first iteration of the project involved three cohorts of youth over three years (2020 -2022) that participated in tailored employment interventions during the summer. IMPACT 1.0 involved 283 youth and outcomes revealed an increase in overall paid and unpaid work experiences, as 114 youth (45.1%) gained paid work experience and 125 youth (49.4%) gained unpaid work experience.<sup>1</sup> When asked about their experiences, 193 (77.5%) of the youth agreed or strongly agreed that they were satisfied with their experience in the program. The summative results confirm the overall objective of IMPACT 1.0 and demonstrate that the agencies' tailored interventions improved the youth's unique strengths, interests, and confidence about their work skills as well as current and future employment.

IMPACT 2.0 is a continuation of the project; the research objectives have been scaled up as well as the number of partner organizations with two additional member organizations of the BCEN. Each of the ten agencies developed and delivered tailored vocational training and planning. As with the first three years of IMPACT, the CIIC is providing a neutral, arms-length evaluation of IMPACT 2.0. The UBC Behavioural Research Ethics Board granted ethics approval for IMPACT 2.0. A concurrent mixed methods formative evaluation design (Creswell & Plano Clark, 2011) informed the assessment and evaluation of the first cohort of IMPACT 2.0. The data was collected and the summer youth employment interventions delivered by the ten partner agencies' employment specialists between June 2023 and October 2023.

The IMPACT 2.0 project reflects continued efforts to address low employment rates and earnings for individuals with intellectual and developmental disabilities (IDD) in BC, Canada (CLBC, 2023). Funded by the BC Ministry of Social Development and Poverty Reduction, IMPACT 2.0, a partnership project between the BC Employment Network (BCEN) and the CIIC, seeks to reduce employment disparities in an effort to improve social inclusion for people with IDD. Specifically, IMPACT 2.0 provides skill building and employment experiences for youth in the process of transitioning from high school to post-school environments, including paid employment. Ten project partners from the BCEN provide tailored vocational training and planning specific to the unique needs of

<sup>&</sup>lt;sup>1</sup> These two categories are not mutually exclusive as a youth could obtain both paid and unpaid work experiences and were able to hold more than one job at a time.

youth with IDD between the ages of 16 - 19, in preparation for continued and future employment.

Whereas IMPACT 1.0 investigated whether early and tailored vocational training and planning for youth with IDD positively impacted their employment outcomes, IMPACT 2.0 investigates *what types* of tailored vocational training and planning practices are more effective in fostering positive employment outcomes such as increased knowledge about employment as well as employment experiences (paid and/or unpaid). Five agencies conducted a prescribed three-stage approach and five adhered to their chosen agency's intervention approach used in IMPACT 1.0. In addition, IMPACT 2.0 pays closer attention to potential gender-based discrepancies in vocational training and planning experiences and employment outcomes.

This report details the findings of the first cohort of IMPACT 2.0. Following changes to the research hypotheses based on findings from IMPACT 1.0, adjustments were made to some of the data collection instruments (e.g., intervention diaries) to address the research hypotheses and to incorporate agency feedback (e.g., improve accessibility of data collection instruments and questions for the youth and their parents/carers). The ten partner organizations used convenience and criterion sampling to recruit youth for the first cohort in 2023. A total of 111 youth and 111 parents/carers enrolled in June 2023, with 103 youth and 102 parents/carers completing the full summer program and exit interviews by October 2023.

Data related to agency interventions, the youth's engagement, and the parent/carer observations of their youth were collected through pre- and post-interviews as well as intervention diaries. The pre-program or 'entrance' interviews for youth include demographic questions, a self-assessment of level of support (level of disability), guestions about the youth's knowledge of employment, previous employment experiences, and the completion of a Meticulon Assessment Survey (MAS, 2020). The MAS is an assessment instrument covering 12 domains or "soft skills" as predictors for obtaining and retaining future employment. Parents/carers entrance interviews include demographic questions about their youth and the MAS as observed from the parent/carer's perspective of their youth's soft skills. The post-program or 'exit' interviews repeat questions about the youth's knowledge of employment, new employment experiences, and the MAS. Exit interviews also include questions about the youth's experiences during the vocational training and planning interventions they participated in over the summer. Parents and carer exit interviews similarly contain the MAS regarding their youth's soft skills and questions about their youth's experiences during the summer program.

In addition, agency employment specialists systematically recorded the youth's activities in an individualized and ongoing intervention diary to document what specific vocational training and planning the youth engaged in during IMPACT 2.0, as well as their degree of participation. To assess both change over time in the pre- and post-interviews and what types of vocational training and planning interventions are most effective in improving employment experiences and outcomes, five agencies followed a prescribed three-stage approach and five adhered to their agency specific free intervention approach. Each youth's intervention diary reflects whether they were part of the threestage framework or the free intervention framework to test whether the type and time spent in tailored interventions matters for employment experiences and outcomes. The distinction between these two approaches to tailored vocational training and planning is meant to elucidate if a prescribed framework, tailored to the youth and the specific intervention stages would be more effective for vocational training and benefit the youth's experiences and employment outcomes.

This report presents some preliminary findings for the first cohort for IMPACT 2.0. The findings that reveal that especially interventions geared towards job development and on-the-job training are statistically significantly related to an increase in employment outcomes for the 103 youth that participated. The 54 youth that participated in the three-stage approach, following a pattern of discovery and career exploration, skill building, and job development gained an increase in employment experiences the more time they spent in discovery and career exploration and job development experiences the more time they spent in the free intervention approach gained an increase in employment experiences the more time they spent in discovery and career exploration and job development, the latter group, time spent in discovery and career exploration and skill building had a negative impact on job development training and employment outcomes.

A gender-based analysis shows that, although not statistically significantly different, some gender-based discrepancies were visible in the findings for this first cohort of IMPACT 2.0. Male youth obtained more paid employment experiences than females. Even though females obtained more contracts per person, these were more often unpaid work experiences. Males obtained fewer contracts per person, but more often gained paid employment during their time in IMPACT 2.0. This exploratory research and preliminary finding for the first Cohort will inform IMPACT 2.0 moving forward.

Overall, both youth and parental feedback indicate youth appeared to benefit from and enjoy their participation in the IMPACT program. The positive findings based on data from IMPACT 1.0: that *early engagement with IDD youth through tailored employment experiences increases their potential for future job market engagement* – were also evident in results from the IMPACT 2.0 Cohort 1 data. The interviews conducted with

youth in combination with the recorded intervention activities through the developmental diaries revealed overall enthusiasm among the youth to engage in vocational training and planning.

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## Introduction

Transitions of disabled children into adulthood are marked by complexities of bridging childhood to adult services (Duffy & Murray, 2013). One aspect of this transition involves individuals exiting education environments and exploring employment opportunities (Kaya, 2018; Mitchell, 2014). Employment is a key aspiration for individuals with IDD and is an important mechanism for fostering social inclusion and enhancing quality of life. Given this, access and opportunity to engage in inclusive employment is paramount. A main predictor for obtaining employment of individuals with IDD is early intervention with youth who are transitioning from school to adult life (Awsumb et al., 2022; Cimera et al., 2013; 2014; Shattuck et al., 2012; Sung et al., 2015).

To date, research on early interventions to support youth in obtaining employment has tended to concentrate on youth-specific 'job tasks' associated with a particular job (e.g., within retail, stocking shelves or working a cash register), not necessarily tailored to the individual's unique strengths and interests. Although a growing number of studies focus on vocational training for effective career planning as an established predictor of employment outcomes (Baumann et al., 2013; Cheak-Zamora et al., 2015; Grigal et al., 2014; Seaman & Cannella-Malone, 2016; Simonsen & Neubert, 2012; Sung et al., 2015), the majority of these published studies do not address experiences in a Canadian context or the importance of a tailored approach.

In Canada, research on the process of transition for youth with IDD, moving from school to employment environments is sparse (Khayatzadeh-Mahani et al., 2020). Available research demonstrates that transition initiatives and planning are "falling short" (Cheak-Zamora et al., 2015; Magnuson, 2013; Nord, 2020; Smith et al., 2021; Sung et al., 2015; Wehman et al., 2014a; 2014b). In BC, approximately one in five (21.3%) adults with IDD report having had some form of paid employment (CLBC, 2023). However, employed individuals with IDD tend to receive lower wages, work fewer hours, and to work in segregated settings when compared to individuals without IDD (Almalky, 2020; Carter et al., 2012; Grigal et al., 2014; Grossi et al., 2020; Khayatzadeh-Mahani et al., 2020; Smith et al., 2020; Cramm et al., 2009; Flores et al., 2011; Humber 2014; Johoda et al., 2009; Lysaght et al., 2012).

International research continues to demonstrate improved employment outcomes when individuals were employed or had been exposed to employment experiences during their youth transition years (Burgess & Cimera, 2014). Individuals with previous employment experiences or in active employment were likely to remain employed and to receive competitive wages compared to individuals without prior employment

experiences (Burgess & Cimera, 2014; Cimera et al., 2014; Sung et al., 2015; Wehman et al., 2014b). IMPACT 2.0 engages youth with IDD transitioning from school into employment environments, given the lack of available research on that transition for youth with IDD in Canada (CLBC, 2019; Inclusion Canada). Specifically, the project focusses on tailored interventions specific to the unique needs, strengths, and interests of the participating youth.

IMPACT 1.0 showed that tailored vocational training and planning for youth with IDD positively impacted their employment outcomes. IMPACT 2.0 investigates what types of tailored vocational training and planning practices matter more in contributing to the youth their knowledge about employment, employment experiences, and future employment outcomes. Hypothesis I addressed through IMPACT 2.0 is a renewal of our previous objective from IMPACT 1.0. Hypothesis II in IMPACT 2.0 adds the implementation and analysis of both a three-stage approach and the free intervention approach assessed in IMPACT 1.0. Hypothesis III poses that tailored interventions considering the individual's unique needs and strengths will mitigate gender-based societal discrepancies for youth with IDD.

The overarching question informing IMPACT 2.0 research is, "*In what ways is intervening early with youth effective in producing positive employment related outcomes?*"

The hypotheses guiding this report are:

- I. Intervening early with youth with IDD using a tailored approach in vocational training and planning that considers each youth's unique strengths and interests will improve future employment outcomes for these youth.
- II. Tailored interventions that incorporate activities of discovery and career exploration first, skill building second, and job development third will improve employment outcomes for participating youth.
- III. Using a tailored approach that considers each youth's unique strengths and interests will mitigate gender-based discrepancies visible in everyday experiences of youth with IDD.

## 1. Methods

IMPACT 2.0 uses a concurrent mixed methods formative design to evaluate the vocational training and planning outcomes of the summer programming of all 10 partnering agencies (Creswell & Plano Clark, 2011). Five of the ten partner agencies were instructed to organize their interventions and tailored vocational training and planning according to a prescribed intervention design with a focus on three stages: 1) discovery and career exploration interventions, 2) skill building interventions, and 3) interventions specific to searching for and obtaining a job (referred to as Group 1). The other five agencies did not adhere to this three-stage intervention structure and were free to implement tailored interventions in any order or frequency as they saw fit (referred to as Group 2), similar to the tailored interventions observed in IMPACT 1.0.

#### 1.1 Recruitment and Sampling

Eligibility and inclusion criteria for youth to participate in the project meant that:

1) the youth have to be 16, 17, 18, or 19 years of age as of June 1<sup>st</sup>, 2023;

2) the youth have to have a diagnosis of IDD;

3) the youth (or their parent/carer if under the age of majority) has to give consent for participation in the project.

The sample analysed in this report reflects participants unique to IMPACT 2.0.<sup>2</sup>

The ten agencies approached recruitment through recruitment flyers distributed to local organizations that are well-positioned to assist with recruitment (e.g., Inclusion BC, STADD Navigators, and CLBC). In addition, some agencies recruited through their local school districts and some agencies who provide services to youth utilized their built-in referral sources. In total, 103 youth actively participated in this first cohort of IMPACT 2.0. Results are included for youth with which agency employment specialists were able to complete the pre- and post-interviews and intervention diaries.<sup>3</sup> Fifty-four youth (52.4%) participated in the tailored interventions according to the three-stages approach. Forty-nine youth (47.6%) participated in the free intervention approach. Since agencies involved in IMPACT 2.0 had varying levels of capacity to offer the three-stage approach interventions to the youth, this meant that the five agencies adhering to the three-stage approach were those with the most capacity to do so.

<sup>&</sup>lt;sup>2</sup> Two participants had previously participated in IMPACT 1.0 at a different agency and participated in IMPACT 2.0 cohort 1. These two participants are not part of the evaluation and analysis in this report.

<sup>&</sup>lt;sup>3</sup> Of the original 111 youth that enrolled in the program in June of 2023, two participants were excluded based on prior participation in IMPACT 1.0. Six participants exited the project midway through the summer due to mental health concerns and scheduling conflicts (e.g., summer vacation holidays) and did not complete vocational training and planning.

#### 1.2 Data Collection

After securing participant consent from the youth or their parent/carer to participate in the program, agency employment specialists conducted entrance interviews with the youth and parents/carers (entrance interviews are hereafter referred to as T1). These interviews at T1 establish baseline data. During the IMPACT 2.0 project, employment specialists at each agency kept individual intervention diaries documenting every youth's participation in vocational training and planning activities during the program and the youth's level of participation. At the end of the summer, agency employment specialists conducted exit interviews with the youth and parents/carers (exit interviews are hereafter referred to as T2). These interviews at T2 establish change over time. In addition, the project manager and consultant compiled work confirmation information from all agencies regarding obtained employment experiences (paid and unpaid) for each of the youth at T2.

Each youth was given a \$25 gift card four times during their involvement in IMPACT 2.0. They received a gift card following interviews at T1 and T2 and monthly during their time in the program. In terms of evaluation, both youth and parents/carers' interviews at T2 include questions for reflection about their experiences in IMPACT 2.0. The next section details the measures used in the data collection process.

#### Measures

Evaluation of IMPACT 2.0 cohort 1 is based on data as reported by agency employment specialists based on interviews with the youth themselves at T1 and T2. At T1, youth answered questions about their gender identification, age, and highest completed Grade or level of education as of June 2023. Youth were asked to self-identify their level of support required in seven areas of support/assistance in the Arc's Level of Support Subscale, followed by a question about their overall need for support during the school or work day. T1 also asked the youth to relate their previous employment experiences (paid and unpaid) as well as their general knowledge about employment and expectations for the IMPACT 2.0 program. Youth completed the MAS, consisting of twelve predictive domains or "soft skills" for getting and keeping a job. At T2, youth answered questions about employment experiences they gained during their time with IMPACT 2.0. Similar to the interview at T1, youth were asked about their general knowledge about employment specialists asked youth questions related to their experiences with IMPACT 2.0 and their overall satisfaction with the program.

Part of the evaluation of IMPACT 2.0 cohort 1 is based on data provided by parents/carers at T1 and T2. Parents/carers completed additional demographic

questions about their youth as well as their youth's overall level of support needed during the work or school day and the MAS. At T2, parents/carers were asked to reflect on their youth's experiences during IMPACT 2.0, any observed differences in demeanor, and completed the MAS.

Finally, analysis and evaluation of IMPACT 2.0 cohort 1 relies on the individual intervention diaries for every youth that include information about the vocational training and planning the youth participated in and their level of participation. Specific to IMPACT 2.0, evaluation includes the forecasting and analysis of interventions as following either the three-stage or free intervention approach. The dependent employment outcome is assessed based on the multiple variables (interventions) reported for participants in this first cohort, comparing the three-stage approach (hereafter referred to as Group 1) to the free intervention approach (hereafter referred to as Group 2) and their relation to employment outcomes.

#### Arc's Level of Support Subscale

The Arc's Level of Support Subscale was adopted from the Arc's Self-Determination Scale (Wehmeyer 1995) which was specifically designed for IMPACT to enable participating youth to self-assess their level of support needed in seven areas of assistance at T1. The subscale consists of seven questions (see below) along a 3-point scale. Answer options are "None" (1 point), "A Little" (2 points), or "A Lot" (3 points) to indicate support needed in each area of assistance.

Arc's Level of Support Subscale questions:

- When it comes to self-care how much support/assistance do you need?
- When it comes to learning how much support/assistance do you need?
- When it comes to mobility how much support/assistance do you need?
- When it comes to self-direction how much support/assistance do you need?
- When it comes to receptive and expressive language how much support/assistance do you need?
- When it comes to capacity for independent living how much support/assistance do you need?
- When it comes to economic self-sufficiency how much support/assistance do you need?

This subscale is an additive scale, with total scores divided by the number of items, constraining the 7-item scale score to values between 1 and 3; the higher the score, the greater the self-assessed need for support.<sup>4</sup>

#### **Overall Support**

Both youth and their parents/carers were asked about the youth's overall support needed during the school or work day at T1. This question consists of a 5-point scale ranging from "None" (1 point), "A Little" (2 points), "A Medium Amount" (3 points), "A Lot" (4 points), to "I need support all the time" (5 points). The higher the score, the greater the assessed need for overall support.

#### Employment Experiences and Outcomes

Employment experiences and outcomes were measured based on previous and attained employment. Partner agencies reported on participants' previous employment experiences at T1 and documented experiences gained while in IMPACT during T2 interviews. These reported results (T2 – T1) were analyzed as change in employment experiences for this report.

Previous employment experiences collected at T1 include the responses: "No previous experience", "Only unpaid experience", "Only paid experience", or "Both paid and unpaid experience". While the youth participated in IMPACT 2.0, agency employment specialists kept track of any employment experiences gained in intervention diaries and the work confirmation summary. Those paid and unpaid experiences were recorded at T2. Responses were marked as: "No experience gained" (0 points), "Only unpaid experience gained" (1 point), "Only paid experience gained" (2 points), or "Both paid and unpaid experience gained" (3 points).

The rationale behind separating unpaid and paid employment was derived from previous research (e.g., Burgess & Cimera, 2014; Cimera et al., 2014; Sung et al., 2015; Wehman et al., 2014b), indicating the value of previous employment for youth with IDD leaving school in obtaining and retaining employment. Values assigned to unpaid and paid employment experience were based on evidence that unpaid or volunteer employment among youth with IDD is easier to access than paid employment for competitive wages (CLBC, 2023). In turn, the highest value for both unpaid and paid employment experiences is based on the idea that more exposure to work environments leads to more knowledge about employment and is a better indicator for obtaining and retaining employment.

<sup>&</sup>lt;sup>4</sup> The Cronbach's Alpha for the 7-item Arc's Level of Support Subscale is .752.

#### Knowledge about Employment

At T1 and T2, agency employment specialists ask youth to complete seven questions about their knowledge about employment. These seven fill-in-the-blank questions included four possible responses: "Nothing/No/Not" (1 point), "A Little/Some" (2 points), "A Fair Amount (of)" (3 points), to "A Lot (of)" (4 points). Individual mean scores for these seven questions are calculated at T1 and T2 to gauge change over time in the youth's knowledge about employment.<sup>5</sup>

Knowledge about employment questions:

- 1) When it comes to employment, I know \_\_\_\_\_about how to start looking for a job.
- 2) When it comes to employment, I know \_\_\_\_\_about the kind of job I want.
- 3) I have \_\_\_\_\_\_ skills or knowledge about the job that I want.
- 4) When it comes to employment, I know \_\_\_\_\_about how to do a job interview.
- 5) When it comes to employment, I know \_\_\_\_\_\_ about what qualities employers are looking for in a good employee.
- 6) When I think about getting a job, I feel \_\_\_\_\_\_ excited about working.
- 7) When I think about getting a job, I feel \_\_\_\_\_ confident.

#### Meticulon Assessment Survey (MAS)

Both youth and their parents/carers completed the MAS at T1 and T2. The MAS was originally developed by Meticulon Consulting (2020) as an assessment instrument covering multiple predictive domains of "soft skills" for obtaining and retaining a job. Meticulon Consulting (2020) provides employment support to working age individuals with autism spectrum disorder and the survey is used to support these individuals with identifying their strengths and needs on their employment journey. These twelve domains allow for an assessment of the youth's employment capacities and capability domains or employability skills as observed by the youth themselves and their parents/carers. The twelve MAS domains refer to the following "soft skills":

- Time Expectations (3 items).
- Organization (4 items).
- Authority (3 items).
- Teamwork (4 items).
- Perseverance (3 items).
- Responsibility (3 items).

<sup>&</sup>lt;sup>5</sup> The Cronbach's Alpha for the 7-item Knowledge about Employment scale is .748.

- Motivation Level (3 items).
- Mindfulness (3 items).
- Self-Awareness (3 items).
- Communication Skills (3 items).
- Comprehension (3 items).
- Personal Appearance (3 items).

Each individual item refers to a set of questions that are valued according to a 5-value Likert-scale ranging from "Strongly Disagree" (1 point), "Disagree" (2 points), "Neither Agree nor Disagree" (3 points), "Agree" (4 points), to "Strongly Agree" (5 points). Individual item scores are added up and divided by the number of items in each respective domain, resulting in twelve scores ranging from 1 to 5. A higher score indicates better soft skills.

#### Level of Participation

Agency employment specialists completed intervention diaries for each youth to assess the level of participation in the tailored vocational training and planning interventions. Agency employment specialists recorded each youth's level of participation to measure how involved the youth was during the summer program. The level of participation was scored as "1% - 25% participation" (1 point)"; "26% - 50% participation" (2 points); "51% - 75% participation" (3 points); or "76% - 100% participation" (4 points), presenting a level of participation variable ranging from 1 to 4, with a higher score indicating a greater level of participation.

#### **Intervention Diaries**

Each youth participating in IMPACT 2.0 has their individualized intervention diary. Agency employment specialists reported the various vocational training and planning activities the youth participated in. At the start of IMPACT 2.0 cohort 1, five of the ten agencies were provided with an intervention guide for a three-stage tailored intervention approach for the youth participating in those agencies (Group 1). The three stages refer to the discovery stage, skill building stage, and job development stage. The purpose of each of these stages is to incrementally increase the youth's knowledge about their unique skills and opportunities by discovering their preferred career path or employment opportunities, building the required skills and empowerment to pursue that career path, and developing connections and participating in employment experiences aimed at obtaining and retaining employment. The other five agencies (Group 2) provided tailored interventions according to a free intervention approach also observed in IMPACT 1.0. These agencies in Group 2 did not adhere to the three-stage intervention approach followed by Group 1. The three-stage approach and the free intervention approach expressed as time spent in different vocational training and planning exercises are analyzed together with the youth's gained employment experiences during IMPACT 2.0 to estimate the impact of interventions on employment as predictors for future employment.

#### Evaluation Responses

Interviews and surveys were complemented by evaluation statements and reflection questions at various times during the youth's and parent/carer involvement with IMPACT 2.0. At T1, youth were asked about their goals for participating in the program involving statements with "Yes", "No", or "Unsure" answer options.

Statements included:

- I want to get a job.
- > I want to know more about getting a job.
- > I want to know what kinds of jobs I can do.

At T2, youth were asked about their experiences. Six statements were valued according to a 5-value Likert-scale ranging from "Strongly Disagree" (1 point), "Disagree" (2 points), "Neither Agree nor Disagree" (3 points), "Agree" (4 points), to "Strongly Agree" (5 points). A higher score reflects a higher level of positive experience.

Statements included:

- 1) I liked the IMPACT Program.
- 2) I enjoyed the activities during the IMPACT Program.
- 3) I learned different ways about how to get a paid job during the IMPACT Program.
- 4) What I have learned in the IMPACT Program will help me get a paid job in the future.
- 5) The activities I participated in during the IMPACT Program helped me discover what kind of paid job I want to get in the future.
- 6) I was given the right amount of support to participate in the IMPACT Program.

Parents/carers also reflected on IMPACT 2.0 at T2. Feedback questions about their youth's experiences included five 5-value Likert-scale questions ranging from "Strongly Disagree" (1 point), "Disagree" (2 points), "Neither Agree nor Disagree" (3 points), "Agree" (4 points), to "Strongly Agree" (5 points). Higher scores reflect higher positive associations with their youth's participation in the program. An additional three questions in "Yes" or "No" open question format allowed parents/carers to specify attained employment experiences and observed changes in their youth's behaviour.

Feedback statements included:

- 1) I am overall satisfied with our experience with the IMPACT Program.
- 2) My youth enjoyed learning and experiencing employment related activities.
- 3) My youth learned skills during our time with the program that will help them get a paid job in the future.
- 4) The program addressed potential barriers to employment experiences through training and engagement with job skills.
- 5) The program improved my youth's soft skills (soft skills refer to social and emotional skills, such as confidence and communication).

Open "Yes" and "No" statements with room to explain included:

- As a parent/guardian/caregiver, I noticed changes in my youth's behaviour, attitude, and actions during the course of the IMPACT program.
- If your youth attained paid employment, this job was well suited to their interests and/or skills.
- If your youth attained unpaid employment, this job was well suited to their interests and/or skills.

#### 1.3 Fidelity of Intervention and Implementation

The methods and measures employed in IMPACT 2.0 require a brief comment about the fidelity of implementation of the intervention. According to Breitenstein et al. (2010), "implementation fidelity is the degree to which an intervention is delivered as intended and is critical to successful translation of evidence-based interventions into practice" (p. 164). This refers to a definition of implementation fidelity as the degree to which a program is delivered as intended.

The ten partnered agencies through the BCEN collaborated with the research team and the partner manager and consultant to ensure that interventions were faithfully administered as intended and accurately registered in the pre- and post-intervention interviews, intervention diaries, and work confirmations document. The fidelity of intervention was supported by training sessions on research ethics, data management, and data collection procedures.

Previously established relations through IMPACT 1.0 with eight of the ten agencies improved knowledge about the accurate administration and recording of entrance and exit interviews and collection of data to inform the intervention diaries. The role of the partner manager and consultant are of particular importance in ensuring the correct notation of results as reported by all ten agencies. The research team communicated with the project partners, manager, and consultant to accurately report on the intervention results for this first cohort of IMPACT 2.0. This resulted in further clarification for consistent reporting in the intervention diaries, improving the overall

fidelity of the intervention diaries as an important measure of the type of interventions connected to improved employment outcomes. In addition, this IMPACT 2.0 first cohort serves as the pilot year for IMPACT 2.0 cohorts 2 and 3 to assess the accuracy and efficiency of the data collection instruments and to revise and continue to improve the fidelity of the implementation of the intervention measures.

#### 1.4 Data Analysis

SPSS data analysis software (IBM SPSS Statistics Data Editor 27) was used to conduct the evaluation of the data. We ran an independent samples t-test to establish whether we can find support for Hypothesis II. Youth responses regarding their knowledge about employment at T1 and T2 were compared, using paired samples t-tests to assess statistical significance of differences between means. Similarly, we compared the MAS 12-item scale scores over time using paired samples t-tests for the both youth and parents/carers samples. This comparison allows us to compare the youth's perceptions about themselves in these MAS employability domains at T1 and T2 with the parent/carer perspective about their youth's soft skills at T1 and T2.

We included Pearson's two-tailed bivariate correlation analyses related to each of the measures outlined above. We ran further correlation analyses to see what types of agency interventions are correlated with the youth's paid and unpaid employment outcomes. Specifically, change in employment scores (T2-T1), change in MAS scores (T2-T1), change in knowledge about employment (T2-T1), and level of participation were analyzed for statistically significant relations. In particular, this report paid attention to differences in reported results between Group 1 and Group 2, a gender-based analysis, age-based analysis, support-based analysis, and intervention-based analysis.

## 2. Results<sup>6</sup>

For this first cohort of IMPACT 2.0, 103 youth participated and completed T1 and T2 interviews with their agency employment specialists.

#### 2.1 Demographic Data<sup>7</sup>

#### Gender

Gender identification at T1 relates that 65 of the youth identified as males (63.1%), 35 youth identified as females (34.0%), and 3 youth (2.9%) identified as transgender, a gender variant or non-binary, or preferred not to answer (Table A1). When comparing groups, Group 1 contained 36 youth who identified as male (66.7%) against 29 males (59.2%) in Group 2. Group 1 contained 16 youth who identified as female (29.6%) and in Group 2, 19 youth (38.8%) identified as female (Table A2).

#### Age

The age at T1 for 103 youth was 17.5 years old (Table A5). When comparing groups, both youth in Group 1 and Group 2 are of similar age (Table A6).

#### Ethnicity and Minority Status

When asked about ethnicity and minority status, 12 youth (11.7%) identified as Indigenous (First Nation, Metis, Inuit). Eighty-five youth (82.5%) did not identify as Indigenous and 6 youth (5.8%) preferred not to answer this question (Table A7). When comparing youth in Groups 1 and 2, each group contained 6 youth (Group 1: 11.1%; Group 2: 12.2%) that identified as Indigenous (Table A8). When asked about visible minority status, 26 youth (25.2%) of the complete sample (n=103) identified as a visible minority (Table A9). Sixty-four youth (62.1%) did not identify as a visible minority, and 13 youth (12.6%) preferred not to answer this question. Group 1 contained more youth who identified as a visible minority than Group 2 (Table A10). Sixteen youth (29.6%) in Group 1 identified as a visible minority against ten (20.4%) in Group 2.

#### Education

At T1, all youth were asked about the highest level of education completed as of June 1<sup>st</sup>, 2023. The majority of the youth (51.5%) had completed Grade 12 at that time (Table

<sup>&</sup>lt;sup>6</sup> Appendix A provides tables with results generated through SPSS referenced in the text as "see Table A#" to refer to corresponding data throughout this document.

<sup>&</sup>lt;sup>7</sup> Missing values are indicated only when they occur.

A11). Youth in Group 1 had a lower level of education finished at T1, with 42.6% having completed either Grade 9, 10, or 11, while in Group 2, 24.5% of the youth had completed either Grade 10 or 11 (Table A12).

#### 2.2 Supports

Youth were asked to self-determine their level of support needed during the day in seven areas of assistance as well as overall support.

#### Arc's Level of Support Subscale

For the complete sample (n=103), the 7-item Arc's Level of Support Subscale had a mean of 1.98 with a standard deviation (SD) of .42 (Table A13). When comparing groups, the 7-item Arc's Level of Support Subscale has a mean of 2.02 (n=54; SD= .41) for youth in Group 1 and a mean of 1.92 (n=49; SD= .42) for youth in Group 2 (Table A14).

#### **Overall Support**

The Overall Support Scale filled out by the youth has a mean of 2.88 (n=103; SD=0.93). When comparing groups, the scale has a mean of 2.87 (n=54; SD=0.80) for youth in Group 1 and a mean of 2.90 (n=49; SD=1.07) for youth in Group 2. The Overall Support Scale as observed by the parents/carers regarding their youth has a mean of 3.19 (n=102; SD= .79).<sup>8</sup> When comparing groups, the Overall Support Scale for the parents/carers of youth in Group 1 has a mean of 3.22 (n=54; SD= .77) and a mean of 3.15 (n=48; SD= .825) for those in Group 2 (Tables A17 and A18).

#### 2.3 Employment

Youth were asked questions about their previous work experiences at T1 prior to receiving tailored interventions. Table 1 details the level of employment experience for the complete sample of participants (Tables A19 to A24). Group 1 started out with a group of youth in which 9 youth (16.7%) had no previous experience whereas 8 youth (14.8%) had both unpaid and paid prior work experience (Table 2). Group 2 started out with 6 youth (12.2%) without any prior work experience and 14 youth (28.6%) with both unpaid and paid prior work experience and 14 youth (28.6%) with both unpaid and paid prior work experience and 14 youth (28.6%) with both unpaid and paid prior work experience and 14 youth (28.6%) with both unpaid and paid prior work experience. An independent samples t-test of employment experiences at T1 shows that the two groups are not statistically significantly different.

<sup>&</sup>lt;sup>8</sup> 1 missing.

	Ν	%
No previous work experience	15	14.6
Only unpaid previous	52	50.5
experience		
Only paid previous experience	14	13.6
Both unpaid and paid	22	21.4
experience		
Total	103	100.0

#### Table 1: Employment Experiences at Entrance (T1) for all Participants (n=103)

#### Table 2: Employment Experiences at Entrance (T1) by Group

	Group 1		Gro	oup 2
	Ν	%	Ν	%
No previous experience	9	16.7	6	12.2
Unpaid previous experience	28	51.9	24	49.0
Paid previous experience	9	16.7	5	10.2
Both unpaid and paid	8	14.8	14	28.6
experience				
Total	54	100.0	49	100.0

At T1, 91 youth (88.3%) indicated they wanted to obtain employment. Eighty-seven youth (84.5%) said they wanted to know more about getting a job. Ninety-three youth (90.3%) indicated they wanted to learn about the types of jobs they would be able to do going into the IMPACT 2.0 program. Agency employment specialists kept track of the tailored interventions completed by the youth during IMPACT 2.0. as well as any work experiences obtained during the course of the summer.

#### Employment Outcomes

Employment outcomes include all paid and unpaid work experiences gained during the summer for each of the ten agencies. Employment outcomes were not found to be different when comparing groups based on the results of an independent samples t-test of the difference between the means. In other words, we have not detected a difference in the two intervention approaches in terms of how they affect employment outcomes. Table 3 relates the experiences gained for the complete sample of youth (Tables A25 to A33).

Table 3: Employment Experiences gained during IMPACT 2.0 (T2) for allparticipants (n=103)

	Ν	%
No experience gained	18	17.5
Only unpaid experience gained	36	35.0
Only paid experience gained	43	41.7
Both unpaid and paid experience	6	5.8
gained		
Total	103	100.0

Table 3 shows that 85 out of 103 youth gained some form of experience. Youth were able to obtain more than one contract or work experience over the summer. Figure 1 contains the total work experiences gained for the 85 youth that gained one or more contracts, specified by industry or employment sector. A total of 130 contracts signed were signed by the 85 participants who gained some form of work experience during their participation in the program.

#### Figure 1: Number of employment contracts (130) by Industry for 85 participants



Manufacturing/Utilities

Table 4 relates the work experiences gained specified per contract, comparing youth in Group 1 and Group 2. In general, 66 of the 130 contracts (50.8%) were paid work experiences or types of employment. Group 1 included 26 (40.6%) paid employment contracts and Group 2 included 40 (60.6%) paid employment contracts.

	Gro	up 1				Gro	up 2			
	Nun	nber	of co	ntrac	ts	Nun	nber	of co	ntrac	ts
	1	2	3	4		1	2	3	4	
Part time	10	-	-	-	10	7	1	-	-	8
Part time	6	-	-	-	6	13	6	2	1	22
seasonal										
Full time	1	-	-	-	1	-	-	-	-	-
seasonal										
Contract	5	5	-	-	10	1	1	-	-	2
Self-	1	-	-	-	1	2	5	1	-	8
employment										
Work	21	9	5	1	36	18	5	2	1	26
experience										
Total	44	14	5	1	64	41 2	18	5	2	66
						2				

#### Table 4: Employment Contracts gained during IMPACT 2.0 (n=85)

<sup>1</sup>10 youth gained no employment; <sup>2</sup> 8 youth gained no employment.

Those youth that did not obtain employment contracts during their time in IMPACT 2.0 were not proportionally different in terms of their demographic data than the group of participants that did gain employment experiences. One observable difference was that those youth without gained employment experiences had a lower level of participation in tailored interventions.

## 3. Evaluation

Youth completed various questions about their experiences during IMPACT 2.0. Similar to the interview at T1, T2 repeated the measures related to Knowledge about Employment and the youth their self-determined soft-skills as predictors of future employment in the MAS (Tables A34 to 39).

#### 3.1 Knowledge about Employment

Table 4 compares the Knowledge about Employment results for the total sample of participants at T1 and T2. The scale for each question ranges from "Nothing/No/Not" (1 point), "A Little/Some" (2 points), "A Fair Amount (of)" (3 points), to "A Lot (of)" (4 points). Mean scores at T1 are subtracted from scores at T2 to reveal the difference in score and whether this was a statistically significant change (Tables A34 & A35). The scores on six of the seven questions increased significantly between T1 and T2.

Question:	Mean T2	Mean T1	Difference (T2 – T1)
When it comes to employment, I know [blank] about how to start looking for a job	2.78	2.24	.54***
When it comes to employment, I know [blank] about the kind of job I want	2.81	2.53	.28*
I have [blank] skills or knowledge about the job that I want	2.76	2.36	.40***
When it comes to employment, I know [blank] how to do a job interview	2.80	2.12	.68***
When it comes to employment, I know [blank] about what qualities employers are looking for in an employee	2.98	2.41	.57***
When I think about getting a job, I feel [blank] excited about working	3.02	2.97	.05
When I think about getting a job, I feel [blank] confident	2.86	2.66	.20*

Table 4: Knowledge about Employment (T2 – T1) for 103 participants

#### 3.2 Meticulon Assessment Survey (MAS)

Table 5 compares the MAS results for the total sample of participants at T1 and T2. Mean scores at T1 are subtracted from scores at T2 to reveal the difference in scores and whether this was a statistically significant change for each of the 12 domains (Tables A36 to A39). See also the section on measures in this report for the specific details about the MAS and the scores. The domains of authority, responsibility, comprehension, and personal appearance revealed a statistically significant increase.

Domains	Mean T2	Mean T1	Difference (T2 – T1)
Time Expectations	3.77	3.68	.10
Organization	3.89	3.81	.09
Authority	3.86	3.66	.20**
Teamwork	3.98	3.90	.08
Perseverance	3.67	3.60	.07
Responsibility	3.86	3.69	.17**
Motivation Level	4.02	4.02	.00
Mindfulness	4.22	4.17	.06
Self-Awareness	3.73	3.61	.12
Communication Skills	3.64	3.56	.09
Comprehension	3.99	3.81	.18**
Personal Appearance	4.08	3.95	.14**

Table 5: Paired Samples t-Test Mean Scores at T2 – T1 for all participants (N=103)

Paired samples t-Tests for each of the twelve MAS domains showed no statistically significant changes when dividing the complete sample by intervention group (results not shown).

#### 3.3 Level of Participation

Apart from tracking various tailored interventions that the youth took part in, employment specialists at each agency tracked the level of participation for each of the youth. Of the complete sample of youth, 76 (73.8%) participated with 75 – 100% dedication. Table 6 relates the level of participation comparing Group 1 to Group 2 (Table A40). Group 1 had 4 youth (7.4%) in the 0%-24% participation level. Details from their intervention diaries specified these youth experienced difficulty participating in the program over the summer, due to mental health concerns or absence due to family vacations.

	Group 1		Group	2
	N	%	N	%
0%-24%	4	7.4	-	-
25%-49%	4	7.4	5	10.2
50%-74%	6	11.1	8	16.3
75%-100%	40	74.1	36	73.5
Total	54	100.0	49	100.0

#### Table 6: Level of Participation by Group

#### 3.4 Intervention Diaries

Participant intervention diaries as kept and regularly updated by agency employment specialists kept track of the type of interventions that the youth participated in. For the 103 youth, the minimum amount of time spent in direct interventions with employment specialists completing interventions was 450 minutes (7.5 hours) and the maximum amount of time was 6230 minutes (104 hours), with a mean of 2312 minutes (38.5 hours).

#### Three-stage approach

The three stages of tailored interventions and vocational training included 1) discovery and career exploration activities, 2) skill building interventions, and 3) job development or on-the-job coaching and training (Tables A42 & A43). Agencies in Group 1 followed this three-stage approach in which tailored interventions were organized according to these three areas of focus. Agency employment specialists and the youth were asked to spent time in each area of focus. This meant youth in Group 1 spent more time in discovery and career exploration exercises with an average of about 6 hours spent in this area. By comparison, youth in Group 2 on average only spent about 2 hours in discovery and career exploration. Both groups spent about eight meetings with the youth (either individually or in groups) developing life and employment skills. A major difference in time allotment was visible in the time spent in direct job development and on-the-job coaching. Group 1 spent about 10 hours on this area of career development and Group 2 spent about 21 hours in job development on average. This meant youth in Group 2 more often spent most of their time during IMPACT 2.0 in a direct job placement supported by job coaching without spending significant time in discovery and career exploration.

#### 3.5 Youth Evaluation Responses

Youth were asked to reflect on their experiences in IMPACT 2.0 Cohort 1 at T2. Feedback was positive overall (Tables A43 to A45). Of the complete sample of youth, 88 youth (85.4%) agreed or strongly agreed that they liked the program. Eighty-nine youth (86.4%) indicated that they agreed or strongly agreed that the activities they participated in during the IMPACT Program helped them discover what kind of paid job they want to get in the future.

#### 3.6 Parent/Carer Responses and Evaluations

To better gauge the impact and relevance of the tailored interventions on the youth, agencies asked parents/carers to also complete the MAS, reflecting their perspective on the youth's soft skills at T1 and T2 (Tables A38 & A39). One-hundred parents reflected on their youth's twelve domains of soft skills as future employment predictors. MAS results from parents/carers of youth in Group 2 show a positive statistically significant change in the domains of authority and communication skills. This means parents/carers observed a positive change in their youth's soft skills related to authority and communication.

When asked to reflect on their perception of the program and their youth's experiences, 92 out of 100 agreed or strongly agreed they were satisfied with the program (Tables A46 & A47). Eighty-nine parents/carers agreed or strongly agreed that their youth learned skills during their time with the program that will help them get a paid job in the future.

## 4. Discussion

Many youth with IDD do not receive employment-related transition planning and supports (Butcher & Wilton, 2008; Lysaght, Ouellette-Kuntz, & Lin, 2012; Simonsen & Neubert, 2012). IMPACT 2.0 continues to address this unmet need by providing tailored vocational training and planning supports for youth. As established in the introduction to this report, few interventions focus solely on employment or post-secondary aspirations for transitioning youth with IDD. Unlike their peers without disabilities, youth with IDD are not routinely included in employment-related planning and preparation. Informed by the results and enthusiasm in IMPACT 1.0, this second iteration of the IMPACT summer program (IMPACT 2.0) provides us with more insights into potential determinants of improved employment outcomes for youth with IDD.

#### 4.1 Objectives

The objective of this research is to determine effective ways to improve employment experiences and outcomes of youth with IDD, transitioning from school to employment. The main objective guiding the research is based on the question, "In what ways is intervening early with youth effective in producing positive employment related outcomes?" IMPACT 2.0 results demonstrate that youth experiences in either Group 1 or Group 2 led to improved employment outcomes. Similar to IMPACT 1.0, interventions

considered each youth's unique strengths and interests. An objective specific to IMPACT 2.0 is the analysis of such tailored interventions and how they might mitigate gender-based discrepancies visible in everyday experiences of youth with IDD.

### 4.2 Complete Sample (N=103) Analysis

As established in the results section, youth were predominantly male (63.1%), did not identify as Indigenous (82.5%) or a visible minority (62.1%), was on average 17.5 years of age, and had completed at least Grade 12 at June 1<sup>st</sup>, 2023. Analyses of level of support and the ARC 7-item scale did not generate statistically significant relations to employment outcomes (results not shown).

Table 7 presents the results for a bivariate correlation analysis for the complete sample (n=103). Employment outcomes (T2 – T1) reflect the gained employment experiences of the youth during their time in IMPACT 2.0. Employment outcomes and time spent in job development show a positive relation ( $p \le .001$ ), that is, the more time youth spent on job development-related skill building during their time participating in IMPACT 2.0, the greater the likelihood that they would report having achieved improved employment outcomes. Although time spent in discovery or career exploration and time spent in skill building interventions are in a statistically significant relation with each other, neither of these intervention components is related to employment outcomes (T2 – T1).

	Minutes spent	Minutes	Minutes
	in discovery/	spent in	spent in job
	career	skill	developmen
	exploration	building	t
Employment outcomes	.056	.115	.414***
T2 - T1			
Minutes spent in		286**	227*
discovery/career		.200	221
exploration			
Minutes spent in skill			276**
building			

Table 7: Pearson Bivariate Correlation for Employment Outcomes andInterventions

\* Statistically significant at  $p \le .05$ ; \*\* Statistically significant at  $p \le .01$ ; \*\*\* Statistically significant at  $p \le .001$ .

Changes in the complete sample's knowledge about employment was not significantly correlation to employment outcomes or the change in MAS domains (results not shown).

#### 4.3 Comparing Groups

When comparing youth in Group 1 and Group 2, the level of education between groups with an independent samples t-test reveals that the observed difference is not large enough to be statistically significant in this particular sample (Table 8).

	Group 1	Group 2
Gender	66.7% Male; 29.6%	59.2% Male; 38.8%
	Female	Female
Mean age	17.4	17.7
Indigenous identification	11.1% Indigenous	12.2% Indigenous
Visible minority	29.6% Visible minority	20.4% Visible minority
identification	_	_
Education level	57.4% Grade 12 or higher	75.5% Grade 12 or higher

Table 8: Demographic	: Data Group 1	and Group 2
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When looking at employment experiences gained and the types of interventions logged in the intervention diaries, bivariate correlation (Table 9) reveals that time spent in job development activities is positively related to employment outcomes. On the other hand, more time spent in discovery and career exploration intervention components is associated with poorer employment outcomes (T2 - T1) in Group 2.

Table 9: Pearson Bivariate Correlation for Employment Outcomes andInterventions comparing Groups

	Minutes spent in discovery/ career exploration		Minutes skill buil	spent in ding	Minutes spent in job development	
	Group 1	Group 2	Group 1	Group 2	Group 1	Group 2
Employment outcomes T2 - T1	.347*	302*	.094	.168	.536***	.415**
Minutes spent in discovery/career exploration			.584***	114	.005	363*
Minutes spent in skill building					072	351*

\* Statistically significant at  $p \le .05$ ; \*\* Statistically significant at  $p \le .01$ ; \*\*\* Statistically significant at  $p \le .001$ .

#### 4.4 Gender-based Analysis<sup>9</sup>

For the complete sample of 103 youth, this first cohort of IMPACT 2.0 contained two dominant gender groups; male (n=65) and female (n=35). Two youth identified as either transgender male or a gender variant/non-binary. One youth preferred not to answer the question about their gender identification. For the purpose of analysis, the non-dominant group of three youth are not included, as their number are too small for statistical analysis. The research team and agency specialists recognize the gender-based discrepancies visible in everyday experiences of youth with IDD, especially for youth that are part of the LGBTQIA2S+ demographic. In turn, required anonymization of data limits the specific analysis of a small group of youth that does not identify as male or female. This report will therefore centre a gender-based analysis of data available for those that identified as either male or female.

The average age for males in this cohort was 17.6 against 17.5 for females. Ten males identified as Indigenous (15.4%) and two females identified as Indigenous (5.7%). Twenty-one males (32.3%) identified as a visible minority and five females (14.3%) identified as a visible minority. Twenty-four (68.6%) females and 42 males (64.6%) had completed grade 12 or higher. In terms of support, both groups self-identified a medium level of support needs during the day. The Arc Level of Support 7-item scale mean for both groups is similar as well. Independent samples t-tests for age, overall support needed, visible minority status, and level of education comparing male and female groups at T1 were not statistically significantly different.

Employment experiences at T1 for those identifying as male or female are reflected in Table 10. Females had more previous experience at the start of their summer program than youth in the male group, but less paid experience. Independent samples t-tests for employment experiences at T1 and T2 as well as employment outcomes (T2 - T1) comparing male and female groups at T1 were not statistically significantly different.

			• •	
	Males		Femal	es
	Ν	%	Ν	%
No previous experience	14	21.5	1	2.9
Unpaid experience	26	40.0	24	68.6
Paid experience	12	18.5	2	5.7
Both unpaid and paid	13	20.0	8	22.9
experience				
Total	65	100.0	35	100.0

#### Table 10: Employment Experiences T1 comparing Males and Females

<sup>&</sup>lt;sup>9</sup> For the purpose of this first cohort of IMPACT 2.0, groups would become too small if apart from gender also divided in prescribed and non-prescribed intervention groups.

At T2, male participants had gained more employment experiences than female participants. Table 11 summarizes the gained employment experiences for both groups. Females gained more unpaid experiences than paid experiences both within their group and compared to the male group.

Table 11: Employment Experiences	gained (T2)	comparing	Males and	Females
(N=100)				

	Males		Fema	iles
	Ν	%	Ν	%
No experience gained	10	15.4	7	20.0
Gained unpaid experience	21	32.3	14	40.0
Gained paid experience	31	47.7	12	34.3
Gained unpaid and paid	3	4.6	2	5.7
experience				
Total	65	100.0	35	100.0

When comparing the number of employment experiences or contracts gained per individual, three females had four contracts during their time in IMPACT. None of the males had four contracts. The total of number of contracts per group was 75 out of 130 for the 55 males that gained some experience and 52 out of 130 for the 28 females that gained paid or unpaid or both types of experiences. Three of the 130 contracts belonged to the three youth that did not identify as either male or female.

In terms of the youth's knowledge about employment and change over time, Table 12 relates the change over time for those in the male and female groups. Statistically significant increases were observed in the male and female groups when asked about their knowledge regarding how to look for a job, their knowledge about employer expectations, and their knowledge about job interviews. The male group also saw a statistically significant increase in their knowledge about the type of job they want and their knowledge and skills required for the type of job they want.

	Males (n:	=65)	Difference	Females	(n=35)	Difference
	Mean	Mean	(T2 - T1)	Mean	Mean	(T2 – T1)
	T2	T1	(	T2	T1	
Question 1	2.78	2.26	.52***	2.80	2.14	.66***
Question 2	2.85	2.54	.31*	2.74	2.51	.23
Question 3	2.92	2.46	.46***	2.49	2.17	.32
Question 4	2.91	2.09	.82***	2.63	2.09	.54***
Question 5	2.98	2.43	.55***	3.00	2.34	.66***
Question 6	3.20	3.00	.20	2.74	2.91	17
Question 7	2.94	2.72	.22	2.80	2.54	.26

Table 12: Knowledge about Employment (T2 – T1) comparing Males and Females

Results of the change in the twelve MAS domains (T2 - T1) reflecting soft skills as predictors of future employment resulted in statistically significant change for the male group. The domains of authority, responsibility, comprehension, and appearance showed a statistically significant increase. For the female group, only the domain for authority showed a statistically significant increase. Changes in mean scores for MAS domains and knowledge about employment were not significantly correlation to employment outcomes (T2 - T1) for either group.

#### 4.5 Age-based Analysis

An age-based analysis for the complete sample (n=103) and the employment experiences gained during IMPACT 2.0 is reflected in Figure 2. Age was not statistically significantly correlated to employment outcomes (T2 – T1) or differences in mean scores for the MAS or knowledge about employment.





#### 4.6 Support-based Analysis

A support-based analysis of the youth's self-identified ARC's 7-item level of support scale, the overall support scale, and the parental overall support scale are not correlated with employment outcomes. These scales are significantly correlated to one another but show no negative or positive statistically significant relation with other measures.

#### 4.7 Qualitative Feedback

At T2 in August and September of 2023, several agencies collected testimonials from parents of youth that had participated in the program. According to one parent, "my youth is super proud of their job they secured through IMPACT 2.0. They love to talk about their job to anyone who asks them about it. Impact 2.0 is a great service to get youth out of their comfort zone and open up new skills" (parent 1). Apart from excitement about newly attained employment, parents also described the importance of building social relationships through the summer program. One parent shared: "My youth met some wonderful people while working this summer" (parent 2). In addition,

the focus on various abilities helped overcome barriers previously seen as prohibiting youth from looking for a job:

We also learned that they were able to take initiative for themselves when we hadn't seen them do that. Because of the job they got this summer, my youth has really found a purpose for themselves and now I am less worried that they will be taken advantage of. My youth struggles with motor skills and this job have really shown that they are able to do the job that they want. It was a barrier in their life before but now they can see that they can improve and are now able to use tools. (parent 3)

Testimonials from these parents indicate employment goes hand-in-hand with the various soft skills that show up as domains for future employment in the Meticulon Assessment Survey (MAS). The tailored interventions boost both direct skills related to finding employment and being an employee and increase participant levels of confidence in the process. According to one caregiver, IMPACT "was a great introduction into paid employment, and they are so proud of their job" (parent 4). Pride and confidence were witnessed by multiple parents, who identified "Impact 2.0 was a great confidence builder. It taught my youth responsibility to be on time" (parent 5).

Some participants also reflected on their experiences in IMPACT. According to one youth, "there are two important things I learned: shake hands and also make eye contact when talking to the manager" (youth 1). Another youth who was working at a grocery store enjoyed being with peers that were also in the IMPACT 2.0 program:

It was nice to meet other people who were in the similar positions at the time. In the IMPACT 2.0 project, I learned things that were valuable to me, the pacing of work environments, and the types of routine to expect from specific workplaces. I was able to obtain a job after the IMPACT 2.0 project. ... My biggest advice is that the program is a great opportunity and you can meet several others who are in the same position of looking for jobs. (youth 2)

Several other participants shared similar experiences and enjoyed both learning about employment and building new relations on the work floor. According to one youth, "it was good for job preparation. I figured out what I wanted and not wanted to do. ... It was a fantastic place to meet new people. It was a great launching pad for learning work expectations. I got prepared for employment. The program was really good and it helped with my social skills" (youth 3). Another participant shared, "this was my first ever job, and I really liked it. I liked working with my job coaches. The events at my school

and at the office were fun" (youth 4). Similar to observations by parents, this youth acknowledged their confidence had grown:

IMPACT 2.0 helped me with interview skills, meeting new people and interacting with people. It helped me to find a job ... I learned how to get there by transit, how to be a good team player and to be productive. It has helped me with my confidence. ... IMPACT 2.0 is a very good program and I hope other youth get the chance to be part of it too. (youth 5)

## 5. Assessment

In relation to Hypothesis I, this first cohort for IMPACT 2.0 presents preliminary findings that reveal that higher levels of participation and time spent in tailored interventions increases employment outcomes. Especially interventions geared towards job development and on-the-job training are statistically significantly related to an increase in employment outcomes for the 103 youth.

In relation to Hypothesis II, the 54 youth in Group 1 gained an increase in employment experiences the more time they spent in discovery and career exploration and job development. The youth that participated in Group 2 gained an increase in employment experiences the more time they spent in job development. For youth in Group 2, increased time spent in discovery and career exploration and skill building had a negative impact on job development training and employment outcomes. Employment outcomes were not found to be different when comparing Groups 1 and 2 based on the results of an independent samples t-test of the difference between the means. In other words, we have not detected a difference in the two intervention approaches in terms of how they affect employment outcomes.

In relation to Hypothesis III, a gender-based analysis shows that male youth obtained more paid employment experiences than females. Even though females obtained more contracts per person, these were more often unpaid work experiences. Males obtained fewer contracts per person, but more often gained paid employment during their time in IMPACT 2.0. However, this observed numerical difference did not appear to be statistically significant. Nevertheless, this exploratory research and preliminary finding for the first Cohort will inform future cohorts and results.

Overall, both youth and parental feedback indicate youth appeared to benefit from and enjoy their participation in the IMPACT program. The positive findings based on data from IMPACT 1.0: that *early engagement with IDD youth through employment* 

experiences increases their potential for future job market engagement – were also visible in results from IMPACT 2.0 Cohort 1 data. The interviews conducted with youth in combination with the recorded intervention activities through the developmental diaries reveal overall enthusiasm among the youth and their parents/carers to engage in vocational training and planning.

#### 5.1 Limitations

The main limitations of this first cohort of IMPACT 2.0 are related to the relatively small sample size. Smaller sample sizes have less power to detect a true effect because the study may so far not be able to identify real differences or effects if they exist. It also reduces the representativeness of the data as small samples are less likely to accurately reflect characteristics of the populations from which the samples are drawn. Findings based on these smaller sample sizes are not generalizable to the larger population. The results reported for cohort 1 might be specific to the particular sample size and the subgroup analyses specific to this sample. These subgroup analyses of a limited number of youths further reduce the sample size in each category, complicating the analysis and interpretation of subgroup differences. Observable differences in Groups 1 and 2 group though not statistically significant meant that slightly older age and higher level of completed education in Group 2 partly explain the positive relation between direct on-the-job training and an increase in employment outcomes. These limitations associated with a smaller sample size will be addressed as more youth complete the summer employment program and vocational training through IMPACT 2.0 in 2024 and 2025.

Another observed limitation pertained to increased reports of mental health strain and anxiety experienced among youth. Several agencies communicated with the project manager and consultant that youth were struggling with active participation when also dealing with mental health barriers. In addition, the post-COVID-19 reality meant youth were engaging in multiple activities in their summer months that previously were limited due to COVID-19 limitations on travel and leisure activities. Summer holidays in some cases limited participation and strained communication with some youth who turned up to activities less frequently than was observed among samples in IMPACT 1.0. Increased agency effort and communication will try to mitigate these observed limitations to participation going forward.

#### 5.2 Moving Forward

Richness of the data in qualitative feedback will be expanded through focus groups and interviews with youth and parents during follow-up in April of 2024. The preliminary results of this exploratory cohort will inform the further development of the intervention activities and will inform more gender-based engagements by employment specialists to account for gender-based discrepancies observed in employment outcomes.

Additional cohorts will mean more youth will be able to participate in the tailored interventions at the ten collaborating agencies. This will increase the sample size and allow for more in-depth analyses to gauge whether prescribed sequence of interventions has a positive and significant relation with employment outcomes. A larger sample size could allow for the research team to run both linear regression and logistic regression analyses to estimate the strength of impact of multiple interventions on employment outcomes and see if we can create a predictive model to forecast employment outcomes based on specific types of interventions.

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## **Appendix A: SPSS Data and Tables**

This appendix contains the complementary data to the IMPACT 2.0 Cohort 1 report for 2024.<sup>10</sup> Tables are referenced in the main report and contextualized separately in this appendix. Throughout the document, tables are specified as pertaining to the entire sample of youth or as pertaining to a comparison between the group of youth in the prescribed pathway interventions (n=54) and group of youth in the non-prescribed pathway interventions (n=49).

#### Results

#### 2.1 Demographic Data

Tables A1 to A12 contain demographic data for the 103 youth that participated in the first cohort of IMPACT 2.0. Only those youth that completed entrance (T1) and exit (T2) interviews for this cohort are included and represented in this sample. Tables A3 and A4 relate to information from the parent or caregiver of the youth and their relation.

	Ν	%
Male	65	63.1
Female	35	34.0
Transgender Male	1	1.0
Gender variant/Non-	1	1.0
binary		
Prefer not to answer	1	1.0
Total	103	100.0

#### Table A1: Gender Identification (Youth)

#### Table A2: Gender Identification Comparing Groups (Youth)

	Group 1		Gro	up 2
	Ν	%	Ν	%
Male	36	66.7	29	59.2
Female	16	29.6	19	38.8
Transgender Male	1	1.9	-	-
Gender variant/Non-	1	1.9	-	-
binary				
Prefer not to answer	-	-	1	2.0
Total	54	100.0	49	100.0

<sup>&</sup>lt;sup>10</sup> Tables might contain discrepancies in numerical calculations that occur as a result of rounding.

	Ν	%
Parent	98	95.1
Guardian	1	1.0
Relative	2	1.9
Other	1	1.0
Total	102 <sup>1</sup>	100.0

#### Table A3: Relation to the Youth (Parent and Carers)

<sup>1</sup> One youth of 19 years old did not have a parent or carer collaborate on the project.

#### Table A4: Relation to the Youth Comparing Groups (Parent and Carers)

	Group 1		Gro	up 2
	N	%	Ν	%
Parent	52	96.3	46	93.9
Guardian	1	1.9	-	-
Relative	-	-	2	4.1
Other	1	1.9	<b>1</b> <sup>1</sup>	2.0
Total	54	100.0	49	100.0

<sup>1</sup> One youth of 19 years old did not have a parent or carer collaborate on the project.

#### Table A5: Age at Entrance (per June 1<sup>st</sup>, 2023)

	Ν	%
16	18	17.5
17	32	31.1
18	34	33.0
19	19	18.4
Total	103	100.0

	Group 1		Gro	up 2
	Ν	%	N	%
16	11	20.4	7	14.3
17	19	35.2	13	26.5
18	15	27.8	19	38.8
19	9	16.7	10	20.4
Total	54	100.0	49	100.0

	Ν	%
Yes	12	11.7
No	85	82.5
I prefer not to	6	5.8
answer		
Total	103	100.0

Table A7: Youth Identification as Indigenous (First Nation, Metis, Inuit)

Table A8: Youth Identification as Indigenous (First Nation, Metis, Inuit) ComparingGroups

	Grou	ıp 1	Group 2		
	N	%	N	%	
Yes	6	11.1	6	12.2	
No	48	88.9	37	75.5	
Prefer not to	-	-	6	12.2	
answer					
Total	54	100.0	49	100.0	

#### Table A9: Youth Identification as a Visible Minority

	N	%
Yes	26	25.2
No	64	62.1
I prefer not to	13	12.6
answer		
Total	103	100.0

#### Table A10: Youth Identification as a Visible Minority Comparing Groups

	Grou	ıp 1	Group 2		
	N	%	Ν	%	
Yes	16	29.6	10	20.4	
No	34	63.0	30	61.2	
I prefer not to	4	7.4	9	18.4	
answer					
Total	54	100.0	49	100.0	

	Ν	%
Grade 9	1	1.0
Grade 10	10	9.7
Grade 11	24	23.3
Grade 12	53	51.5
Grade	15	14.6
13/Other		
Total	103	100.0

Table ∆11· H	ighest Grade	or Level	of Education	(per June 1s	t 2023)
	ignest oraue			(per suite i	, 2023)

Table A12: Highest Grade or Level of Education Comparing Groups (per June 1<sup>st</sup>, 2023)

	Gro	oup 1	Group 2		
	Ν	%	N	%	
Grade 9	1	1.9	-	-	
Grade 10	6	11.1	4	8.2	
Grade 11	16	29.6	8	16.3	
Grade 12	21	38.9	32	65.3	
Grade	10	18.5	5	10.2	
13/Other					
Total	54	100.0	49	100.0	

#### 2.2 Supports

The 7-item Arc's Level of Support Subscale has a mean of 1.98 (n=103) with SD of .42. Individual items are reflected in Table A13. When comparing groups, the 7-item Arc's Level of Support Subscale has a mean of 2.02 (n=54) with SD of .41 for those in the prescribed intervention stream and a mean of 1.92 (n=49) with SD of .42 for those not in the prescribed interventions. Individual items for the compared groups are reflected in Table A14.

	Self-care		Learning		Mobility		S dire	Self- ection	Receptive A Expressiv e Language		Inde nt l	epende Living	Eco S suf	onomic Self- ficienc Y
	Ν	%	Ν	%	Ν	%	Ν	%	Ν	%	Ν	%	Ν	%
None	65	63.1	8	7.8	50	48.5	27	26.2	28	27.2	10	9.7	14	13.6
A little	33	32.0	68	66.0	34	33.0	56	54.4	59	57.3	39	37.9	45	43.7
A lot	5	4.9	27	26.2	19	18.4	20	19.4	16	15.5	54	52.4	44	42.7
Total	10 3	100.0	10 3	100.0	10 3	100.0	10 3	100.0	10 3	100.0	10 3	100.0	10 3	100.0

 Table A13: Arc's Level of Support Subscale 7 Areas of Assistance

Table A14: Arc's Level of Support Subscale 7 Areas of Assistance ComparingGroups

	Group 1		Group 2	
	(n=	54)	(n=49)	
Self-care	N	%	N	%
None	34	63.0	31	63.3
A little	17	31.5	16	32.7
A lot	3	5.6	2	4.1
Learning	N	%	N	%
None	4	7.4	4	8.2
A little	36	66.7	32	65.3
A lot	14	25.9	13	26.5
Mobility	N	%	N	%
None	25	46.3	25	51.0
A little	17	31.5	17	34.7
A lot	12	22.2	7	14.3
Self-direction	N	%	N	%
None	12	22.2	15	30.6
A little	31	57.4	25	51.0
A lot	11	20.4	9	18.4
Receptive & Expressive	N	%	N	%
Language				
None	11	20.4	17	34.7
A little	34	63.0	25	51.0
A lot	9	16.7	7	14.3
Independent Living	N	%	N	%
None	4	7.4	6	12.2
A little	19	35.2	20	40.8
A lot	31	57.4	23	46.9
Economic Self-	N	%	Ν	%
sufficiency				
None	6	11.1	8	16.3
A little	24	44.4	21	42.9
A lot	24	44.4	20	40.8

The Overall Support Scale filled out by the youth has a mean of 2.88 (n=103) with SD of .93. When comparing groups, the Overall Support Scale has a mean of 2.87 (n=54) with SD of .80 for those in the prescribed intervention stream and a mean of 2.90 (n=49) with SD of 1.07 for those not in the prescribed interventions.

	Ν	%
No support	3	2.9
A little support	32	31.1
Medium support	52	50.5
A lot of support	6	5.8
I need support all the	10	9.7
time		
Total	103	100.0

Table A15: Overall Level of Support required during the School or Work Day(Youth)

Table A16: Overall	Level of Support required during the School or Work D	Day
(Youth) Comparing	յ Groups	

	Gro	oup 1	Gro	up 2
	N	%	N	%
No support	1	1.9	2	4.1
A little support	15	27.8	17	34.7
Medium support	31	57.4	21	42.9
A lot of support	4	7.4	2	4.1
I need support all the	3	5.6	7	14.3
time				
Total	54	100.0	49	100.0

The Overall Support Scale as perceived by the parents and carers regarding their youth has a mean of 3.19 (n=102) with SD of .79. When comparing groups, the Overall Support Scale for the parents and carers of youth in the prescribed intervention stream has a mean of 3.22 (n=54) with SD of .77 and a mean of 3.15 (n=48) with SD of .825 for those not in the prescribed interventions.

Table A17:	Overall	Level of	Support	required	(Parent/Carer)
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	N	%
A little support	20	19.6
Medium support	47	46.1
A lot of support	31	30.4
Youth needs support all	4	3.9
the time		
Total	102 <sup>1</sup>	100.0

<sup>1</sup> One youth of 19 years old did not have a parent or carer collaborate on the project.

	Group 1		Gro	up 2
	N	%	N	%
A little support	10	18.5	10	20.8
Medium support	23	42.6	24	50.0
A lot of support	20	37.0	11	22.9
Youth needs support all	1	1.9	3	6.3
the time				
Total	54	100.0	48 <sup>1</sup>	100.0

## Table A18: Overall Level of Support required during the School or Work Day(Parent/Carer) Comparing Groups

<sup>1</sup> One youth of 19 years old did not have a parent or carer collaborate on the project.

#### 2.3 Employment

Tables A19 to A33 specify the employment experiences at entrance (T1) and exit (T2). Tables provide information about the baseline level of employment experiences for the youth and the paid and unpaid experiences gained through their engagement with IMPACT 2.0 interventions. It is important to note that youth could have more than one work experience.

Table A19: Previous Paid Employment at T1 (per June 1<sup>st</sup>, 2023)

	Ν	%
Yes	29	28.2
No	74	71.8
Total	103	100.0

Table A20: Previous Paid Employment at T1 Comparing Groups (per June 1st,2023)

	Group 1		Gro	up 2
	Ν	%	Ν	%
Yes	14	25.9	15	30.6
No	40	74.1	34	69.4
Total	54	100.0	49	100.0

	Ν	%
Yes	9	8.7
No	94	91.3
Total	103	100.0

Table A21: Current Paid Employment at T1 (per June 1<sup>st</sup>, 2023)

Of these nine youth that have current paid employment, three (33.3%) have previously had a paying job and two (22.2%) have previously had an unpaid or volunteer position. None of these nine youth with current paid employment had both previous unpaid and paid employment.

	Gro	up 1	Group 2	
	Ν	%	Ν	%
Yes	6	11.1	3	6.1
No	48	88.9	46	93.9
Total	54	100.0	49	100.0

Table A22: Current Paid Employment at T1 Comparing Groups (per June 1<sup>st</sup>, 2023)

Of the six individuals in the prescribed intervention group that were employed at T1 (per June 1<sup>st</sup>, 2023), three have had previous paid employment. One youth in the prescribed and one youth in the non-prescribed intervention group that were employed at T1 had previously had unpaid employment.

 Table A23: Previous Unpaid Employment at T1 (per June 1<sup>st</sup>, 2023)

	Ν	%
Yes	74	71.8
No	29	28.2
Total	103	100.0

Table A24: Previous Unpaid Employment at T1 Comparing Groups (per June 1<sup>st</sup>,2023)

	Group 1		Gro	up 2
	Ν	%	Ν	%
Yes	35	64.8	39	79.6
No	19	35.2	10	20.4
Total	54	100.0	49	100.0

Employment outcomes for the 103 youth reflect that 18 youth (17.5%) gained no work experience. Thirty-six youth (35.0%) gained unpaid work experience, 43 (41.7%) gained paid work experience, and 6 (5.8%) gained both unpaid and paid work experiences during the IMPACT 2.0 program.

Table A25: Work Experience	s gained at T2 (pe	r September 1 <sup>st</sup> , 2023)
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	Ν	%
Yes	85	82.5
No	18	17.5
Total	103	100.0

Table A26: Work Experiences gained at T2 Comparing Groups (per September 1<sup>st</sup>, 2023)

	Group 1		Group 2	
	N	%	N	%
Yes	44	81.5	41	83.7
No	10	18.5	8	16.3
Total	54	100.0	49	100.0





	Group	Group
	1	2
	Ν	Ν
Business/Finance	3	5
Ed/Law/Social	15	13
Service/Community		
Arts/Culture/Rec/Sport	3	8
Sales/Service	26	31
Trades/Transport/Equip	9	2
ment		
Natural	4	6
Resources/Agriculture		
Manufacturing/Utilities	4	1
Total	64	66

Table A28: Total Work Experiences gained per Employment Type at T2 (per September 1<sup>st</sup>, 2023)

	Ν	Ν	Ν	Ν	Ν
Number of work	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	Total
experience					
Part time	17	1	-	-	18
Part time seasonal	19	6	2	1	28
Full time seasonal	1	-	-	-	1
Contract	6	6	-	-	12
Self-employment	3	5	1	-	9
Work experience	39	14	7	2	62
Total	85	32	10	3	130

Table A29: Total Work Experiences gained per Employment Type at T2 Comparin	ng
Groups (per September 1 <sup>st</sup> , 2023)	

		G	roup	<b>)</b> 1		Group 2				
Number of work	1	2	3	4		1	2	3	4	
experiences										
Part time	10	-	-	-	10	7	1	-	-	8
Part time	6	-	-	-	6	13	6	2	1	22
seasonal										
Full time	1	-	-	-	1	-	-	-	-	-
seasonal										
Contract	5	5	-	-	10	1	1	-	-	2
Self-employment	1	-	-	-	1	2	5	1	-	8
Work experience	21	9	5	1	36	18	5	2	1	26
Total	44	14	5	1	64	41	18	5	2	66

Of the total work experiences gained at T2 (130), 66 (50.8%) were paid work experiences or paid types of employment.

		Ν	%	Ν	%	Ν	%	Ν	%	Ν	%
Number o	of work		1		ົ່		2		1	Тс	otal
experienc	ces		1		2		5		4		
Group	Paid	21	47.7	5	35.7	-	.0	-	.0	26	40.6
1	Unpaid	23	52.3	9	64.3	5	100.0	1	100.0	38	59.4
Group	Paid	23	56.1	13	72.2	3	60.0	1	50.0	40	60.6
2	Unpaid	18	43.9	5	27.8	2	40.0	1	50.0	26	39.4

 Table A30: Total Paid Work Experiences at T2 (per September 1<sup>st</sup>, 2023)

Table A31: Employment Experience Score a	at T1 Comparing G	Froups (per June	1 <sup>st</sup> ,
2023)			

	Group 1		Gro	up 2
	N	%	N	%
None (0)	9	16.7	6	12.2
Unpaid only (1)	28	51.9	24	49.0
Paid only (2)	9	16.7	5	10.2
Both unpaid and paid	8	14.8	14	28.6
(3)				
Total	54	100.0	49	100.0

Based on the work confirmations as provided by the ten agencies, 18 youth (17.5%) gained no work experience (unpaid or paid) during the summer employment program. This means their employment score at entry (T1) remained the same. The other 85 youth did have some form of a work experience and were provided with a new employment score at T2 (exit). No gained employment begets a score of 0 points, unpaid (1 point), paid (2 points), and both unpaid and paid (3 points) that was added to the employment score at T1.

Table A32: Employment Experience Score at T2 Comparing Groups (per September 1<sup>st</sup>, 2023)

•			,	
	Gr	oup 1	Gro	oup 2
	Ν	%	Ν	%
0	-	-	3	6.1
1	9	16.7	2	4.1
2	23	42.6	13	26.5
3	11	20.4	14	28.6
4	5	9.3	8	16.3
5	5	9.3	9	18.4
6	1	1.9	-	-
Total	54	100.0	49	100.0

 Table A33: Employment Score Change (T2-T1) Comparing Groups

	Gr	oup 1	Group 2		
	Ν	%	Ν	%	
0	10	18.5	8	16.3	
1	21	38.9	15	30.6	
2	21	38.9	22	44.9	
3	2	3.7	4	8.2	
Total	54	100.0	49	100.0	

#### Evaluation

Upon exit (T2) youth were asked to reflect on the knowledge they gained about employment in relation to IMPACT 2.0 vocational training and planning. Tables A34 to A40 reflect results regarding the youth their knowledge about employment at T1 and T2, followed by results regarding the youth's self-observed soft skills and the parent observed soft skills at T1 and T2 of the youth through the MAS. Table A40 displays the level of participation for the 103 youth. Tables A41 and A42 relate the time spent in the three main categories of tailored interventions for the complete sample and the prescribed and non-prescribed groups. Table A43 to A48 specify youth and parent evaluations of IMPACT 2.0 experiences collected at exit (T2).

Question:	Mean T2	Mean T1	Difference (T2-T1)
When it comes to employment, I know [blank]	2.78	2.24	.54***
about how to start looking for a job			
When it comes to employment, I know [blank]	2.81	2.53	.28*
about the kind of job I want			
I have [blank] skills or knowledge about the job	2.76	2.36	.40***
that I want			
When it comes to employment, I know [blank]	2.80	2.12	.68***
how to do a job interview			
When it comes to employment, I know [blank]	2.98	2.41	.57***
about what qualities employers are looking for			
in an employee			
When I think about getting a job, I feel [blank]	3.02	2.97	.05
excited about working			
When I think about getting a job, I feel [blank]	2.86	2.66	.20*
confident			

 Table A34: Knowledge about Employment at T1 and T2 (n=103)

	G	Group 1 (I	n=54)	G	n=49)	
	Mean	Mean	Differenc	Mean	Mean	Differenc
	T2	T1	e (T2-T1)	T2	T1	e (T2-T1)
Question	2.70	2.19	.51**	2.86	2.31	.55**
1						
Question	2.78	2.43	.35*	2.84	2.65	.29
2						
Question	2.65	2.22	.43**	2.88	2.51	.37*
3						
Question	2.85	2.02	.83**	2.73	2.22	.51**
4						
Question	2.81	2.22	.59**	3.16	2.61	.55**
5						
Question	3.09	2.91	.18	2.94	3.04	10
6						
Question	2.89	2.67	.22	2.84	2.65	.19
7						

 Table A35: Knowledge about Employment Comparing Groups at T1 and T2

Mean	Mean	Difference
T2	T1	(T2-T1)
3.77	3.68	.10
3.89	3.81	.09
3.86	3.66	.20*
3.98	3.90	.08
3.67	3.60	.07
3.86	3.69	.17*
4.02	4.02	.00
4.22	4.17	.06
3.73	3.61	.12
3.64	3.56	.09
3.99	3.81	.18*
4.08	3.95	.14*
	Mean T2 3.77 3.89 3.86 3.98 3.67 3.86 4.02 4.22 3.73 3.64 3.99 4.08	MeanMeanT2T13.773.683.893.813.863.663.983.903.673.603.863.694.024.024.224.173.733.613.643.563.993.814.083.95

Table A36: MAS Paired Samples t-Test Mean Scores at T1 and T2 (Youth)

\* Statistically significant at  $p \le .05$ ; \*\* Statistically significant at  $p \le .01$ ; \*\*\* Statistically significant at  $p \le .001$ .

	G	Group 1 (n=54)		Group 2 (n=49)		
Prescribed	Mean	Mean	Differenc	Mean	Mean	Differenc
Interventions (n=54)	T2	T1	e (T2-T1)	T2	T1	e (T2-T1)
Time Expectations	3.66	3.56	.10	3.90	3.80	.1
Organization	3.88	3.69	.19*	3.91	3.94	03
Authority	3.91	3.56	.36***	3.81	3.78	.03
Teamwork	3.94	3.80	.13	4.04	4.01	.03
Perseverance	3.63	3.48	.15	3.72	3.73	01
Responsibility	3.89	3.59	.30***	3.83	3.80	.03
Motivation Level	4.06	3.95	.11	3.98	4.10	12
Mindfulness	4.17	4.04	.13	4.28	4.31	03
Self-Awareness	3.64	3.43	.22*	3.82	3.80	.02
Communication Skills	3.67	3.40	.27*	3.62	3.73	11
Comprehension	4.00	3.74	.26**	3.98	3.89	.09
Personal Appearance	4.01	3.89	.12	4.16	4.01	.16**

Table A37: MAS Paired Samples t-Test Mean Scores Comparing Groups at T1 and T2 (Youth)

All Parents and	Mean	Mean	Differenc
Carers (n=100) <sup>1</sup>	T2	T1	e (T2-T1)
Time Expectations	3.56	3.59	03
Organization	3.57	3.47	.1
Authority	3.39	3.29	.10
Teamwork	3.65	3.60	.05
Perseverance	3.36	3.28	.08
Responsibility	3.63	3.52	.02
Motivation Level	3.68	3.84	16*
Mindfulness	4.20	4.26	07
Self-Awareness	3.39	3.40	01
Communication Skills	3.29	3.16	.13*
Comprehension	3.55	3.57	03
Personal Appearance	3.73	3.78	05

Table A38: MAS Paired Sam	ples t-Test Mean Scores at T1	and T2 (Parents/Carers)
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<sup>1</sup> 3 missing; \* Statistically significant at  $p \le .05$ ; \*\* Statistically significant at  $p \le .01$ ; \*\*\* Statistically significant at  $p \le .001$ .

	Group 1 (n=53) <sup>1</sup>		Gr	oup 2 (	n=47)²	
Prescribed	Mean	Mean	Differenc	Mean	Mean	Differenc
Interventions (n=53) <sup>1</sup>	T2	T1	e (T2-T1)	T2	T1	e (T2-T1)
Time Expectations	3.53	3.61	09	3.60	3.56	.04
Organization	3.45	3.42	.04	3.70	3.53	.17
Authority	3.43	3.45	03	3.34	3.11	.23*
Teamwork	3.68	3.58	.10	3.61	3.63	02
Perseverance	3.33	3.33	.01	3.39	3.23	.16
Responsibility	3.65	3.54	.11	3.61	3.50	.11
Motivation Level	3.69	3.87	19	3.67	3.81	13
Mindfulness	4.23	4.29	06	4.16	4.23	08
Self-Awareness	3.34	3.44	10	3.44	3.35	.09
Communication Skills	3.26	3.28	01	3.31	3.02	.29**
Comprehension	3.60	3.58	.02	3.49	3.57	08
Personal Appearance	3.79	3.75	.04	3.70	3.77	07

Table A39: MAS Paired Samples t-Test Mean Scores Comparing Groups at T1 andT2 (Parents/Carers)

<sup>1</sup> 1 missing; <sup>2</sup> 2 missing; \* Statistically significant at  $p \le .05$ ; \*\* Statistically significant at  $p \le .01$ ; \*\*\* Statistically significant at  $p \le .001$ .

	Group 1		Gro	up 2
	N	%	N	%
0%-24%	4	7.4	-	-
25%-49%	4	7.4	5	10.2
50%-74%	6	11.1	8	16.3
75%-100%	40	74.1	36	73.5
Total	54	100.0	49	100.0

Table A40: Level of Participation compared by Group

#### Prescribed Interventions Pathway

The predesigned interventions focus on three areas of tailored approach in a sequential way to improve soft skills and provide vocational training as predictors for future employment and to gain insight on a potential formula for increased employment success and future employment. For the 103 youth, the minimum amount of time spent in direct interventions with employment specialists completing interventions was 450 minutes (7.5 hours) and the maximum amount of time was 6230 minutes (104 hours), with a mean of 2312 minutes (38.5 hours).

	Ν	Minimu	Maximu	Mean	Std.
		m	m		Deviation
Number of interventions	103	0	5	2.15	1.403
marked as discovery or					
career exploration					
Minutes spent in	103	0	1020	240.24	240.364
discovery/career exploration					
Number of interventions	103	0	22	8.09	5.836
marked as skill building					
Minutes spent in skill	103	0	3870	962.04	743.349
building					
Number of interventions	103	0	37	6.56	7.611
marked as job development					
Minutes spent in job	103	0	5730	929.51	1211.166
development					

Table A41: Number of Times and Total Time Spent in Discovery/CareerExploration, Skill Building, and Job Development

## Table A42: Number of Times and Total Time Spent in Discovery/CareerExploration, Skill Building, and Job Development Group Comparison

	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	N	Minimu	Maximu	Mean	Std.
			m	m		Deviation
Group 1	Number of interventions	54	1	5	2.67	1.259
-	marked as discovery or					
	career exploration					
	Minutes spent in	54	90	1020	354.91	264.217
	discovery/career exploration					
	Number of interventions	54	0	19	8.00	4.535
	marked as skill building					
	Minutes spent in skill	54	0	2310	1037.1	578.766
	building				3	
	Number of interventions	54	0	17	4.56	4.641
	marked as job development					
	Minutes spent in job	54	0	2790	618.43	788.377
	development					
Group 2	Number of interventions	49	0	4	1.57	1.339
	marked as discovery or					
	career exploration					
	Minutes spent in	49	0	450	113.88	120.814
	discovery/career exploration					
	Number of interventions	49	0	22	8.18	7.046
	marked as skill building					
	Minutes spent in skill	49	0	3870	879.29	889.388
	building					
	Number of interventions	49	0	37	8.78	9.476
	marked as job development					
	Minutes spent in job	49	0	5730	1272.3	1483.940
	development				5	

During the exit interviews (T2), youth and parents were asked to evaluate their experiences in the summer employment program. Tables A43 to A48 relate the results of these feedback responses.

Table A/3.	Vouth	Drogram	Evaluation	at T2	(n=103)	١
Table A43.	rouin	Flogram	Evaluation	αιιΖ	(11-103)	)

	Mean
I liked the IMPACT Program	4.10
I enjoyed the activities during the IMPACT Program	4.14
I learned different ways about how to get a paid job	3.82
during the IMPACT Program	
What I have learned in the IMPACT Program will help	4.10
me get a paid job in the future	
The activities I participated in during the IMPACT	3.84
Program helped me discover what kind of paid job I	
want to get in the future	
I was given the right amount of support to participate in	4.24 <sup>1</sup>
the IMPACT Program	
1 / · · ·	

<sup>1</sup> 1 missing.

I liked the	MPACT Program				
	Strongly	Disagree	Neutral	Agree	Strongly
	disagree				agree
N	-	4	11	59	29
%	-	3.9	10.7	57.3	28.2
I enjoyed t	he activities durin	ng the IMP	ACT Progra	am.	·
	Strongly	Disagree	Neutral	Agree	Strongly
	disagree				agree
N	-	-	19	51	33
%	-	-	18.4	49.5	32.0
I learned d	ifferent ways abo	ut how to g	get a paid j	job during	the IMPACT
Program.					
	Strongly	Disagree	Neutral	Agree	Strongly
	disagree				agree
N	-	12	17	52	22
%	-	11.7	16.5	50.5	21.4
What I hav	e learned in the II	MPACT Pro	gram will	help me ge	t a paid job
in the futu	re.				
	Strongly	Disagree	Neutral	Agree	Strongly
	disagree				agree
N	-	3	11	62	27
%	-	2.9	10.7	60.2	26.2
The activit	ies I participated	in during t	he IMPAC1	Program	helped me
discover w	hat kind of paid j	ob I want t	o get in th	e future.	
	Strongly	Disagree	Neutral	Agree	Strongly
	disagree				agree
N	1	4	28	47	23
%	1.0	3.9	27.2	45.6	22.3
I was giver	n the right amoun	t of suppo	rt to partic	ipate in the	
Program. <sup>1</sup>					
	Strongly	Disagree	Neutral	Agree	Strongly
	disagree				agree
N	-	1	10	59	32
%	-	1.0	9.7	57.3	31.1
4	•	•			

 Table A44: Youth Program Evaluation Distribution Table at T2 (n=103)

 Liked the IMPACT Program

<sup>1</sup> 1 missing.

•	-	• •
	Group	Group
	1	2
	(n=54)	(n=49)
I liked the IMPACT Program	4.00	4.20
I enjoyed the activities during the IMPACT Program	4.06	4.22
I learned different ways about how to get a paid job	3.74	3.90
during the IMPACT Program		
What I have learned in the IMPACT Program will	4.04	4.16
help me get a paid job in the future		
The activities I participated during the IMPACT	3.69	4.02
Program helped me discover what kind of paid job I		
want to get in the future		
I was given the right amount of support to participate	4.17 <sup>1</sup>	4.33
in the IMPACT Program.		
	•	

 Table A45: Youth Program Evaluation Mean Scores Comparing Groups at T2

<sup>1</sup> 1 missing.

Table A46: Parent and Carer Program Evaluation and Feedback at T2 (n=100)<sup>1</sup>

	Mean
I am overall satisfied with our experience with the	4.33
Summer Employment Service program/IMPACT	
My youth enjoyed learning and experiencing	4.16
employment related activities	
My youth learned skills during our time with the program	4.18
that will help them get a paid job in the future	
The program addressed potential barriers to	4.01
employment experiences through training and	
engagement with job skills	
The program improved my youth's soft skills (soft skills	3.89
refer to social and emotional skills, such as confidence	
and communication)	

<sup>1</sup>3 missing.

l am	I am overall satisfied with our experience with the Summer							
Employment Service program/IMPACT								
	Strongly	Disagree	Neutral	Agree	Strongly			
	disagree				agree			
Ν	-	3	5	48	44			
%	-	3.0	5.0	48.0	44.0			
My	youth enjoyed le	arning and	experienci	ng employn	nent related			
acti	vities							
	Strongly	Disagree	Neutral	Agree	Strongly			
	disagree				agree			
Ν	-	3	11	53	33			
%	-	3.0	11.0	53.0	33.0			
My	youth learned sk	ills during	our time wi	th the prog	ram that will			
help	o them get a paid	l job in the f	future					
	Strongly	Disagree	Neutral	Agree	Strongly			
	disagree				agree			
Ν	-	4	7	56	33			
%	-	4.0	7.0	56.0	33.0			
The	program addres	sed potent	ial barriers	to employn	nent			
exp	eriences througl	h training a	nd engagen	nent with jo	b skills			
	Strongly	Disagree	Neutral	Agree	Strongly			
	disagree				agree			
Ν	1	3	15	56	25			
%	1.0	3.0	15.0	56.0	25.0			
The	program improv	ved my you	th's soft sk	ills (soft ski	ills refer to			
SOC	ial and emotiona	l skills, sud	ch as confid	lence and				
con	nmunication)							
	Strongly	Disagree	Neutral	Agree	Strongly			
	disagree				agree			
Ν	-	7	16	58	19			
%	-	7.0	16.0	58.0	19.0			
10					•			

## Table A47: Parent and Carer Program Evaluation Distribution Table at T2 (n=100)<sup>1</sup>

3 missing.

## Table A48: Parent and Carer Program Evaluation Mean Scores Comparing Groupsat T2

	Group	Group
	1	2
	(n=53)	(n=47)
	1	2
I am overall satisfied with our experience with the	4.28	4.38
Summer Employment Service program/IMPACT		
My youth enjoyed learning and experiencing	4.21	4.11
employment related activities		
My youth learned skills during our time with the	4.15	4.21
program that will help them get a paid job in the future		
The program addressed potential barriers to	4.02	4.00
employment experiences through training and		
engagement with job skills		
The program improved my youth's soft skills (soft skills	3.81	3.98
refer to social and emotional skills, e.g., confidence		
and communication)		

<sup>1</sup>1 missing; <sup>2</sup> 2 missing.