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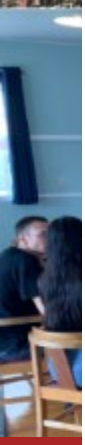








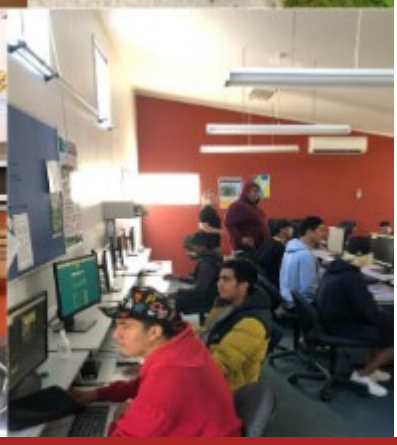

HE POUTAMA TAITAMARIKI AND HE POUTAMA RANGATAHI

Quantitative Evaluation

STANDARD OF PROOF

20 June 2023

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All photos: Ministry of Social Development, He Poutama Taitamariki programme and He Poutama Rangatahi providers

Disclaimer

The Integrated Data Infrastructure (IDI) is a research database managed by Stats NZ. Results using the Integrated Data Infrastructure in this evaluation have been created for research purposes and are not official statistics. For more information about the IDI please visit https://www.stats.govt.nz/integrated-data/.

The results are based in part on tax data supplied by Inland Revenue to Stats NZ under the Tax Administration Act 1994 for statistical purposes. Any discussion of data limitations or weaknesses is in the context of using the IDI for statistical purposes and is not related to the data's ability to support Inland Revenue's core operational requirements.

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EXECUTIVE SUMMARY

He Poutama Rangatahi (HPR) and He Poutama Taitamariki (HPT) are two related youth employment programmes in Aotearoa New Zealand. HPT operates in Te Tai Tokerau (Northland) and is managed and delivered by the Ministry of Social Development (MSD) in this region. HPR is managed by MSD's national office and delivered by community providers nationally (in all eleven MSD regions).

HPR and HPT were originally established to address two issues that had not been resolved by policy settings: high concentrations of rangatahi likely to experience long-term unemployment in some provincial areas and the inability of the regional labour force market to meet demand by employers for unskilled and skilled workers in the same regions. Both programmes were designed to enrol rangatahi (young people)[1] aged 15 to 24 who are not in employment, education or training (NEET) and face the greatest challenges gaining sustained employment. Community providers work with rangatahi, helping them develop social connectedness and resilience so they can lead healthy, happy and productive lives. The activities are expected to lead rangatahi towards their employment, education and training (EET) goals.

MSD commissioned this evaluation to determine the extent to which the programmes are impacting on EET goals for rangatahi, in particular for Māori, and to examine the progress of rangatahi on their pathway in overcoming barriers towards positive life outcomes.

This evaluation made use of Stats NZ's Integrated Data Infrastructure (IDI) to assess the longer-term impacts up to 24 months after enrolment for participants who enrolled between 2018 and 2019. The impacts were estimated through a counterfactual design and are reflective of the HPR and HPT during their pilot years (2018-2019). Participant outcomes were compared to similar statistically matched rangatahi who did not participate in the programmes (the counterfactual). Therefore, the impacts above and beyond what would have been achieved without HPR or HPT support were estimated.

This statistical matching technique, namely Propensity Score Matching (PSM), ensures there are no significant differences between participants and the counterfactual based on observed characteristics. While a wide variety of characteristics have been included, unobserved and uncorrelated differences could still exist. These differences may mean the impacts in this report in part reflect these prior unobserved differences between the two groups rather than just the effect of participating in the programme or not. Nevertheless, this method provides the best available counterfactual considering the programmes were not designed to be evaluated using a randomised-control trial, which requires random allocation of eligible rangatahi to participate in the programmes or a control group. This would have accounted for any unknown differences between the groups. The counterfactual groups may have also received other forms of assistance, so the impacts assessed are above and beyond other forms of assistance offered by MSD.

[1] The HPR programme use 'rangatahi' to describe young people, whereas HPT use "taitamariki'. Throughout this report we use 'rangatahi' when referring to HPR participants and 'taitamariki' when referring to HPT participants. However, when referring to both programmes, we use 'participants' or 'rangatahi'.

HPR and HPT programme data has also been used to tell a broader story about how participants progressed on their pathways towards overcoming barriers to employment, education and training outcomes, albeit without a counterfactual. These data represent more recent HPR participants (those enrolled with providers active since 2020), and all HPT participants (2018-2022).

Findings

He Poutama Rangatahi and He Poutama Taitamariki enrolled large numbers of participants that the programmes were designed to support.

The programmes were originally designed to support 15 to 24 years old NEETs who face challenges gaining sustained employment. Programme data for HPR participants enrolled with providers active since 2020 (n=2998) and HPT participants enrolled between 2018 and 2022 (n=4026) were used to understand whether the programmes were enrolling those who the programmes were originally designed to benefit.

We considered participants to be in the target group of the programmes if they were within the target age range (15 to 24-year-olds) and were either NEET at enrolment or had experienced at least one indicator of long-term unemployment.[2]

We found that 90 percent of HPR participants and 99 percent of HPT participants met this criterion. These results show that both programmes are enrolling high proportions of participants who the programmes were designed to benefit.

The programmes supported employment-related activities and provided equitable employment, education and/or training opportunities for rangatahi Māori during delivery.

HPR programme data also demonstrated the focus on supporting employment-related activities and cultural connection. It shows that the most commonly completed activities were creating materials to enable work (creating CVs, writing cover letters, developing career plans) and other life essentials (setting up bank accounts, IRD numbers and formal identification). Similarly, HPT programme data showed that taitamariki experienced improvements in factors related to work-readiness such as literacy and numeracy skills, completing relevant training and increasing their work experience.

Cultural connection activities (learning te reo Māori, registering with iwi and visiting local marae) were also commonly completed by HPR rangatahi, highlighting the programme's focus on te ao Māori and the integration of tikanga Māori knowledge and values. Similarly, HPT taitamariki felt more connected to their culture, including language, history and cultural practices. They also felt more confident in their abilities, were more comfortable working with others, and experienced improvements in their attitude towards getting and keeping a job.

[2] Indicators include being NEET for at least 6 of the last 12 months from enrolment, highest qualification is NCEA level 2 or lower, has experienced stand-down or expulsion while at school, has a criminal conviction history, or is receiving a benefit at enrolment.

Programme data also showed that 58 percent of HPR and 66 percent of HPT participants achieved an EET outcome during the programme. The percentages include participants who were still participating at the time the data was gathered, and therefore may still have been working towards their goals. When we look at participants who had completed or withdrawn from the programmes, 72 percent of HPR and 68 percent of HPT participants achieved an EET outcome.

There were no significant differences in the rate of placements into EET for Māori compared to non-Māori. This shows that HPR and HPT provided equitable EET opportunities for Māori during their time enrolled in the programmes.

The pilot programmes contributed to improved employment, education and training outcomes.

Longitudinal information from the IDI provided a longer-term view, at least for those enrolled between 2018 and 2019. EET outcomes were measured from enrolment to 6, 12 and 24 months after enrolment to summarise the collective impact of the programmes on engagement with EET over time.[3]

The impact of the HPR pilot (2018-2019) was clear within the first 12 months, as the proportion of HPR participants engaged in EET was 6.4 (± 3.9) and 6.0 (± 3.6) percentage points higher over 6 and 12 months after enrolment respectively than similar non-participants. However, these gains began to diminish after 12 months – there was no statistically significant difference in the proportion of HPR participants engaged in EET compared to similar non-participants over 24 months after enrolment (i.e. we cannot rule out the possibility there was no difference).

The impact of the HPT pilot (2018-2019) was also clear, showing positive and statistically significant benefits for taitamariki up to 24 months after enrolment. More specifically, the proportion of HPT participants engaged in EET was 7.7 (± 4.8), 8.4 (± 4.9) and 6.0 (± 4.5) percentage points higher over 6, 12 and 24 months after enrolment respectively than similar non-participants. Comparatively, the results suggest the EET impact was sustained for HPT taitamariki longer than HPR rangatahi. This may be due to the HPT cohort being slighter older than the HPR cohort.

The pilot programmes did not contribute to higher rates of employment or sustained employment.

HPT used a youth employment pathway questionnaire to assess participants on their ability to sustain employment in the short term. Responses show that HPT taitamariki made progress in their ability to sustain employment, with scores improving by 1.8 (± 0.5) points after they enrolled in the programme, a small but statistically significant improvement.

For a beneficial sustained impact due to the programmes, we would expect the proportion of participants in employment to be maintained 24 months after enrolment and beyond. Using participants enrolled between 2018 and 2019 linked in the IDI, we

[3] EET outcomes were calculated by averaging the proportion engaged in EET over the 6, 12, and 24 months after enrolment. See Appendix A for more details.

measured employment outcomes 19 to 24 months after enrolment to assess sustained employment impacts (rather than estimating the collective impact over time as with EET).

We found no statistically significant difference in the proportion of HPR and HPT participants in employment compared to similar non-participants 19 to 24 months after enrolment. These results indicate the pilot programmes did not sustain higher rates of employment, when considering those who participated between 2018 and 2019.

Additionally, the programmes were expected to contribute to improved rates of sustained employment (defined as being in continuous employment for 6 months), above and beyond what would have been achieved without HPR and HPT. Again, we found no statistically significant differences in the proportion of HPR and HPT participants in sustained employment 24 months after enrolment, indicating the pilot programmes did not contribute to improved sustained employment.

The pilot programmes reduced benefit receipt up to 12 months after enrolment.

In the same way as for EET, benefit outcomes were measured from enrolment to 6, 12 and 24 months after enrolment to summarise the collective impact of HPR and HPT on benefit receipt over time.[4]

The proportion of HPR participants on a main benefit was 8.7 (± 6.7) and 8.2 (± 5.2) percentage points lower over 6 and 12 months after enrolment respectively than similar non-participants. These show the HPR pilot contributed to reduced benefit receipt that would not have been achieved without the programme up to 12 months after enrolment. However, these net reductions began to diminish over time and were not statistically significant 24 months after enrolment.

Similarly, the proportion of HPT participants on a main benefit was 5.3 (± 5.2) percentage points lower 12 months after enrolment than similar non-participants, a statistically significant impact. The net reduction was not significant 6 months after enrolment, indicating HPT's impact on benefit receipt reduction took longer to materialise than HPR. The reduction was also not significant 24 months after enrolment.

Conclusions

Overall, HPR and HPT were effective in terms of enrolling participants who the programmes originally intended to support. The HPR and HPT pilot were also effective in contributing to benefits for rangatahi over and above similar non-participating rangatahi in terms of benefit receipt and employment, education and training outcomes.

However, the effects on employment diminished over time, meaning that the HPR and HPT pilot were ineffective at contributing to sustained benefits of higher rates of employment over time and sustained employment, at least with the earliest cohorts of participants (2018-19). These results may suggest that the pilot programmes have

[4] Benefit outcomes were calculated by averaging the proportion of those aged 18 or over receiving a main benefit over the 6, 12, and 24 months after enrolment. See Appendix A for more details.

significant impact while the rangatahi are being supported, but limited impact after the support has stopped.

Importantly, these estimated impacts reflect the effectiveness of HPR and HPT during their pilot years (2018-2019). Both programmes have since implemented adaptations to their delivery which are not reflected in these results, such as extending the length of contracts and the time support is given to rangatahi.

Further, the impacts assessed 12 and 24 months after enrolment coincide with the COVID-19 pandemic, with rangatahi facing financial instability and existing inequalities for Māori and Pacific rangatahi likely exacerbated during this time.[5] Nonetheless, we expected that these COVID-19 effects would be experienced similarly for participants and non-participants, particularly as the matching technique ensured these groups had similar demographic profiles and similar patterns of engagement with EET before enrolment. This meant we assumed the technique could detect any programme effects on participant outcomes, albeit within the COVID-19 context.

Limitations

This evaluation assessed the impacts of HPR and HPT up to 24 months after enrolment on the outcomes of participants who enrolled between 2018 and 2019. While this two-year follow up period provides insight into the longer-term effectiveness of the programmes, some outcomes (such as sustained employment) may require a longer period of time to be observed. This could be due to the ongoing impact of COVID-19, but it also may be expected given that establishing desired employment and career goals takes time, particularly whilst these rangatahi experiment with different EET opportunities.

Further, due to data availability limitations, those enrolled in later years are not included. HPR participants who enrolled after 2019 have not been linked to the IDI and are therefore unavailable for use. HPT participants who enrolled after 2019 have been linked, however there was no way to distinguish these participants from those who did not participate.[6]

As mentioned, the estimated impacts are therefore reflective of the programmes during their pilot years (2018-2019). Any subsequent changes made to the delivery of the programmes are therefore not reflected in these results. HPR and HPT have both implemented adaptations to their delivery since the pilot years, specifically in terms of extending the length of time support is given to rangatahi. It is suggested that MSD continue to evaluate these programmes, including those who enrolled from 2020 onwards on outcomes observed two years after enrolment and beyond.

[5] Webb S, Kingstone S, Richardson E, Flett J. Rapid Evidence Brief: COVID-19 Youth Recovery Plan 2020-2022. 2020. Wellington: Te Hiringa Hauora/Health Promotion Agency
[6] See Appendix A for more details.

INTRODUCTION

He Poutama Rangatahi

He Poutama Rangatahi (HPR) was established by the Ministry of Business, Innovation and Employment (MBIE) in December 2017 in response to national concerns about high rates of young people not in education, employment or training (NEET).

The programme was established to address two issues that had not been resolved by policy settings: high concentrations of rangatahi likely to experience long-term unemployment in some provincial areas and the inability of the regional labour force market to meet demand by employers for unskilled and skilled workers in the same regions.

Since its inception, HPR has focused on a subgroup of rangatahi: 15- to 24-year-olds who are NEET and face challenges in gaining sustained employment. HPR is a project-based youth employment scheme delivered by local organisations and contracted providers who work with both employers and rangatahi. HPR was developed and implemented through a partnership approach between central government and regional leadership and was designed to facilitate the regional delivery of life skills and education, training and employment opportunities to local rangatahi.

In January 2018, HPR was piloted in four regions: Te Tai Tokerau (Northland), Eastern Bay of Plenty, Hawke's Bay and Tairāwhiti (Gisborne). Historically, these regions have seen high rates of young people who are NEET, especially rangatahi Māori. HPR prioritised supporting community-based programmes in order to strengthen youth skills for work-readiness and employment. The He Poutama Taitamariki programme (see below) received partial funding through HPR.

HPR supports community providers to enrol rangatahi into their programmes based on their local knowledge, expertise and connections. When they apply to receive HPR funding, providers are asked to demonstrate how they will enrol the rangatahi who are NEET and face challenges gaining sustained employment, such as through other local support, community organisations, and social media. Some rangatahi are referred by whānau, peer groups, and government agencies such as MSD, Oranga Tamariki and the Police.

In 2019, HPR received further funding as an investiture workstream of the Provincial Growth Fund to lift productivity potential and support improved outcomes for rangatahi in all regional communities, especially rangatahi Māori. The programme was expanded beyond the four initial regions.

In July 2021, HPR was transferred from MBIE to MSD, on the basis that providing employment-related services complemented MSD's core functions. Further, the transfer was believed to assist continued consolidation of service delivery, improve clarity for providers, employers and clients on how to access work-readiness and employment support and services, and to support the alignment of reporting requirements.

He Poutama Taitamariki

He Poutama Taitamariki (HPT) is a specialised employment programme for taitamariki aged 15 to 24 in Te Tai Tokerau who are NEET and face challenges in gaining sustained employment.

The programme is managed and delivered by MSD and provides intensive case management, wraparound support and pastoral care to guide 15- to 24-year-olds to achieve positive social and employment outcomes.

The programme is delivered by MSD case manager navigators, youth specialists and youth employment specialists and is supported by service delivery administration, programme and contracts coordinators and youth communications. As HPT is managed and delivered by MSD, taitamariki in Tai Tokerau aged 18-24 who receive a main benefit are automatically referred to the HPT programme. Other taitamariki, similarly to HPR, are referred through the community and word of mouth. For example, by their family and friends who may be (or know) past participants, through the Police or through hapū.

The primary function of case manager navigators and youth specialists is, following an assessment of each young person, to connect them to activities at different points of their journey based on their individual needs. An individualised programme guides participants through the required elements of their journey towards the eventual goal of social connectedness, further training, education and employment.

Youth specialists are responsible for providing ongoing support and mentoring to 15- to 17-year-olds. In effect, they are the 'case manager navigators' for the younger cohort. They ensure that an individualised plan is developed for these participants and that they are referred to and supported by the services and learning that meet their needs. Taitamariki determine their journey forward and their referrals on to appropriate support, training and employment services.

The underpinning delivery approaches for taitamariki in this service are manaaki tangata (pastoral care), digital literacy and cultural awareness. HPT provides ongoing manaaki tangata for each individual participant. This support may continue for up to 12 months or longer.

The overarching aims of HPT are to assist taitamariki to attain social connectedness, and educational, training and employment goals with the resilience to sustain the outcomes leading to healthy, happy and productive lives.

Evaluation purpose

The quantitative findings presented in this report are intended to feed into the final evaluation reports for HPR and HPT, where qualitative and quantitative evidence will be synthesised. The qualitative evidence will provide greater context through performance stories. The final HPR and HPT evaluation reports will answer several key evaluation questions, evaluate success and provide recommendations based on synthesised evidence.

This evaluation report answers two key evaluation questions (KEQs) that are most relevant to the quantitative evidence and includes evaluative judgements based on quantitative evidence only.

Key evaluation questions (KEQs)

1. To what extent have He Poutama Rangatahi and He Poutama Taitamariki achieved their intended education, training and/or employment goals for targeted rangatahi, in particular for Māori?
2. How well and to what extent have rangatahi participating in He Poutama Rangatahi and He Poutama Taitamariki progressed on a pathway, overcoming barriers towards positive life outcomes?

EVIDENCE & APPROACH OVERVIEW

Evaluation approach

The evaluation was commissioned to help MSD understand the effectiveness of HPR and HPT and to estimate those effects above and beyond what would have been achieved without the programmes.

MSD anticipates that this evidence will be used to inform the New Zealand Government (funders) and the public about the value of the programmes for rangatahi and to inform decisions about the continuation of the programmes. This evidence also contributes to a learning purpose for MSD.

To support these objectives, we have applied the principles and techniques from the Real World Evaluation approach, which addresses budget, time, data and political constraints whilst ensuring maximum possible methodological rigor is applied within the particular evaluation context.[7]

Evidence quality and use

This evaluation uses a mixture of analytic approaches. Two key secondary data sources are used – programme data and participants linked with administrative data sources available in Stats NZ's IDI.

Our approach relies heavily on data available in the IDI and the application of Propensity Score Matching (PSM) to provide robust impact estimates to answer the key evaluation questions and to assess the success of programme effectiveness in achieving its intended goals.

More specifically, participants who enrolled with the programmes between 2018 and 2019 have been linked to the IDI. Therefore, administrative data about their engagement with EET, benefit receipt and corrections outcomes were available and analysed in this evaluation. PSM was used to identify comparable participants, so that any changes in outcomes realised by those enrolled could be tested against those not receiving HPR and HPT support.[8] Matching and identifying similar comparison groups is necessary, given that simple pre- and post-test comparisons, without a counterfactual, would likely overestimate the programme effects.[9]

Nonetheless, programme data is used without a counterfactual to complement the evidence. It tells a broader story than would otherwise be available within an administrative dataset like the IDI. HPR and HPT capture demographic data about participants and their employment, education and training outcomes achieved during the programmes. Additionally, information about participant progression is also monitored, albeit in different ways. HPR collects information about the intermediary activities participants have completed, whereas HPT administers a three-monthly questionnaire that measures overall ability to sustain employment. Further, due to a change in monitoring data requirements, HPR data represents those enrolled with

[7] Bamberger, M., Rugh, J., Mabry, L. (2006). Real World Evaluation. Sage Publications: London.
[8] See Appendix A for more details.
[9] Aiken et al, 1998, as cited in Rossi et al, 2004: 298.

providers active since 2020, whereas HPT data represents all participants enrolled since the inception of the programme. Pre-post analysis on HPT participant progression in their ability to sustain employment is included in this evaluation, however the absence of a counterfactual means that these changes may be overestimating programme effects.

These data sources, and their quality, are summarised below.

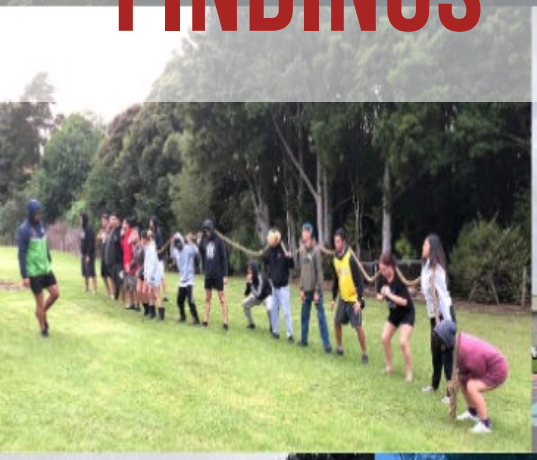
Table 1: Overview of evidence used in this evaluation and its quality

	HPR programme data	HPT programme data	IDI
	2998 rangatahi and 61 providers representing rangatahi enrolled with providers active since 2020	**4026 rangatahi** representing rangatahi enrolled from 2018 to September 2022	**510 HPR and 828 HPT rangatahi** representing rangatahi enrolled between 2018 and 2019
Is there sufficient data to compare relevant groups (i.e., power)?	Yes	Yes	Yes
Are the results balanced, with low to moderate risk of bias?	Yes, albeit with some risk of bias	Yes, albeit with some risk of bias	Yes
Are the results likely generalisable to the programmes?	No, data is limited[10]	Yes	No, data is limited[11]
Are relevant comparison groups used?	No	No	Yes

The quality of the evidence used in this evaluation was deemed appropriate for its agreed purpose. The findings should be used in the context of these evidence standards.

[10] While there are some rangatahi in this data that enrolled between 2018 and 2020, the majority (94%) of the data represents those enrolled from 2021 to 2022. This dataset therefore represents rangatahi enrolled in HPR between 2021-2022.
[11] Due to data availability and limitations, results from the IDI represents rangatahi who enrolled in HPR and HPT between 2018 and 2019.

FINDINGS



Programme and participant overview

Both HPR and HPT aim to improve outcomes for NEET rangatahi aged 15 to 24 who face challenges in gaining sustained employment. Both programmes emerged from the social sector trials[12] and have been operational since 2018. While both programmes focus on work-readiness, skills and employment, there are some differences: systems for labour market scanning and governance arrangements, delivery mechanisms and access, types of support that participants receive, and the process by which data is collected and reported on.[13] An overview of the scale of each programme and key demographics of participants is provided in this section, with participant information sourced from programme monitoring data collected at enrolment.

He Poutama Rangatahi providers support rangatahi across New Zealand (all 11 MSD regions).

As of January 2023, 7,165 rangatahi have enrolled in HPR. While HPR was originally piloted in Te Tai Tokerau, Eastern Bay of Plenty, Hawke's Bay and Tairāwhiti, it has now expanded to cover all 11 MSD regions across New Zealand. Of the 95 providers in total, 63 are actively providing services to rangatahi. The remaining have completed their contracts and are no longer providing services to rangatahi through MSD funding.

In 2020, HPR monitoring requirements changed to make reporting easier for providers and more useful for operational staff. Previously, quarterly reports summarised rangatahi enrolment, progression and outcome statistics. These requirements shifted to monthly reports including rangatahi-level information about enrolments, outputs completed and EET outcomes achieved, rather than summarised information.

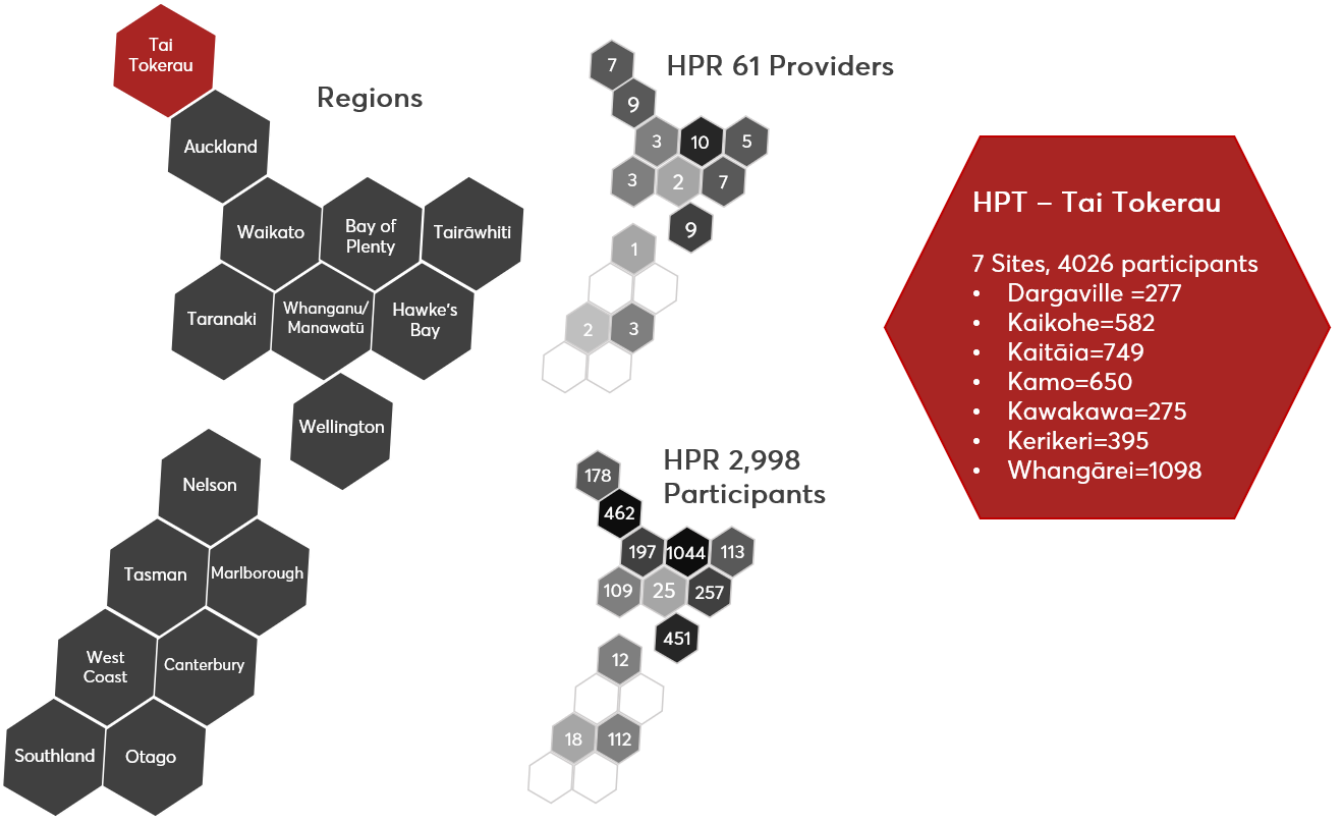
The HPR programme data used in this evaluation is therefore based on rangatahi enrolled with providers that were active and providing monthly reports since 2020 (n=2998 participants enrolled with 61 providers, see Figure 1).

He Poutama Taitamariki support taitamariki across seven sites in Te Tai Tokerau.

As of September 2022, 4,026 taitamariki have enrolled in HPT. The programme provides support to taitamariki across seven sites in Te Tai Tokerau, with Whangārei providing services to the highest number of participants (see Figure 1). In 2018, 418 taitamariki enrolled in the programme. HPT has grown in the following years, with 1,286 taitamariki enrolling in 2019, 931 in 2020 and 843 in 2021.

[12] CSRE (2013). Final Evaluation Report: Social Sector Trials – Trialling New Approaches to Social Sector Change. Centre for Social Research and Evaluation, Ministry of Social Development, Wellington.
[13] Ministry of Social Development He Poutama Rangatahi and He Poutama Taitamariki Evaluation Project Plans.

Figure 1: Number of enrolled participants, providers and regions for HPR (participants enrolled with providers active since 2020 to January 2023) and HPT (participants enrolled from 2018 to September 2022)



He Poutama Rangatahi and He Poutama Taitamariki are enrolling high rates of rangatahi Māori.

Ethnicity collected upon enrolment is a multi-response variable, meaning participants can be counted in as many ethnicities as they choose.[14] We retained the multi-responses when deriving ethnicity, meaning, for example, that an individual can be listed as both Māori and Pacific in the dataset used for analysis.

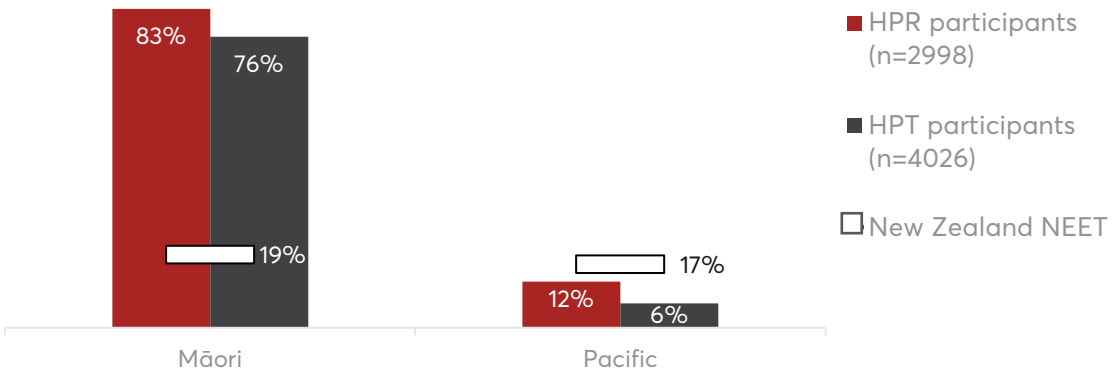
Māori make up the majority of participants in both programmes. More specifically, 83 percent of HPR participants and 76 percent of HPT participants identify as Māori. In comparison, 19 percent of Māori rangatahi in New Zealand are not in employment, education or training.

On the other hand, 12 percent of HPR participants and 6 percent of HPT participants identify as Pacific, whereas 17 percent of Pacific rangatahi in New Zealand are not in employment, education or training.[15]

The ethnic make up of participants highlights that both programmes have an intentional focus on enrolling and supporting rangatahi Māori, as intended.

[14] Ethnicities supplied in the enrolment form include Māori, NZ European, Pacific Islander and Other.
[15] A high proportion (~64%, Stats NZ 2018) of the Pacific residential population reside in Auckland. Lower proportions of Pacific participants may be explained in part due to both programmes having low (or no) representation in the Auckland region. Specifically, only 15% (n=2,998) of HPR programme participants reside in Auckland. This difference is naturally greater for HPT who do not operate in Auckland.

Figure 2: Proportion of HPR and HPT participants identifying as Māori or Pacific compared with percentages of Māori and Pacific youth not in employment, education or training in New Zealand. ***Source: New Zealand NEET rates from Figure NZ, 2022 Young Māori and Pacific people who are not in employment, education or training in New Zealand***



There were slightly more male participants than female.

From the enrolment data, participants identifying as female were 43 percent for HPR (n=2998) and 47 percent for HPT (n=4026). Those identifying as male was therefore 56 percent of HPR participants and 52 percent of HPT participants.

A higher percentage of female participants had caregiving responsibilities compared to male participants for both programmes. More specifically, 12 percent of HPR females (n=1263) and 13 percent of HPT females (n=1895) had caregiving responsibilities, compared to 7 percent of HPR males (n=1635) and 4 percent of HPT males (n=2099).

However, the percentages of male participants who were NEET at enrolment were higher when compared to females: 72 percent of HPR females (n=1298) and 88 percent of HPT females (n=1916) were NEET at enrolment, compared to 75 percent of HPR males (n=1675) and 93 percent of HPT males (n=2105).

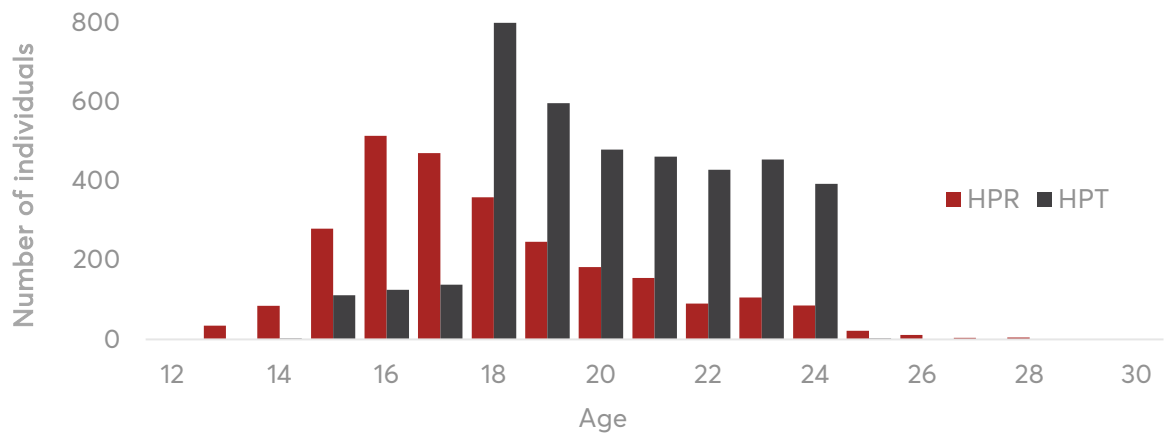
Only 20 HPR and 13 HPT participants identified as gender diverse. Due to the small number of gender-diverse participants, gender breakdowns in the findings of this report include male and female only.

Most participants were between 15 and 24 years old.

Participants between the ages of 15 and 24, the target age group of the programme, was 93 percent for HPR (n=2998). Almost all HPT participants were within this target age group for the programme. Further, as shown in Figure 3,[16] the age distribution of HPR skewed towards the younger cohort, whereas for HPT it skewed towards the older cohort.

[16] 309 participants were excluded as their age was provided as an age group rather than a value. An additional 31 HPR participants aged over 30, which are likely data entry errors, are also excluded.

Figure 3: Age distribution of HPR and HPT participants



KEQ1: To what extent have He Poutama Rangatahi and He Poutama Taitamariki achieved their intended education, training and/or employment goals for targeted rangatahi, in particular for Māori?

Both programmes enrolled rangatahi not in employment, education or training or who face challenges gaining sustained employment

He Poutama Rangatahi and He Poutama Taitamariki enrolled large numbers of participants that the programmes were designed to support.

HPR and HPT are both programmes designed to support 15- to 24-year-olds who are NEET and face challenges in gaining sustained employment. Upon enrolment, demographic information about participants is collected, as well as indicators of long-term unemployment. These indicators were chosen to be collected through engagement with community groups, iwi, employers, local agencies and government officials, and supplemented with published literature about indicators of long-term unemployment.[17] [18] [19] [20] [21]

An important consideration for enrolment into the programmes is to enable a broader focus than NEET rangatahi, as the definition may miss those who require support but are moving between low paid or short-term jobs or low-level education.[22] Therefore, we considered participants to be in the group that the programmes were designed to support if they were 15 to 24 years of age and were either NEET at enrolment or had experienced at least one indicator of long-term unemployment.

We defined likelihood to experience long-term unemployment as having one of the following indicators at enrolment:

1. NEET for at least 6 of the last 12 months
2. Highest qualification is NCEA Level 2 or lower
3. Has experienced stand-down or expulsion while at school

[17] HPR monitoring and evaluation framework, revised.
[18] Ball, C., Crichton, S., Templeton, R., Tumen, S., Ota, R., and MacCormick, C. (2016). Characteristics of Children at Greater Risk of Poor Outcomes as Adults. The Treasury Analytical Paper 16/01.
[19] Crichton, S., Templeton, R. and Tumen, S. (2015). Using Integrated Administrative Data to Understand Children at Risk of Poor Outcomes as Young Adults. New Zealand Treasury Analytical Paper 15/01.
[20] Research New Zealand. (2016). Mid to Far North Employer Engagement. Prepared for Ministry for Primary Industries. MPI Technical Paper.
[21] Smits, R. (2017). Kaikohe GROW: End of Project Report. Te Puni Kōkiri, Ministry for Primary Industries, Ministry of Social Development, Te Pai Aronga Taitamariki.
[22] McGirr, M. (2019). Not just about NEETs: A rapid review of evidence on what works for youth at risk of limited employment. Ministry of Education.

4. Has a criminal conviction history
5. Receiving a benefit[23]

We found that 90 percent of HPR participants and 99 percent of HPT participants were within the target age group and were either NEET at enrolment or had at least one indicator of long-term unemployment.

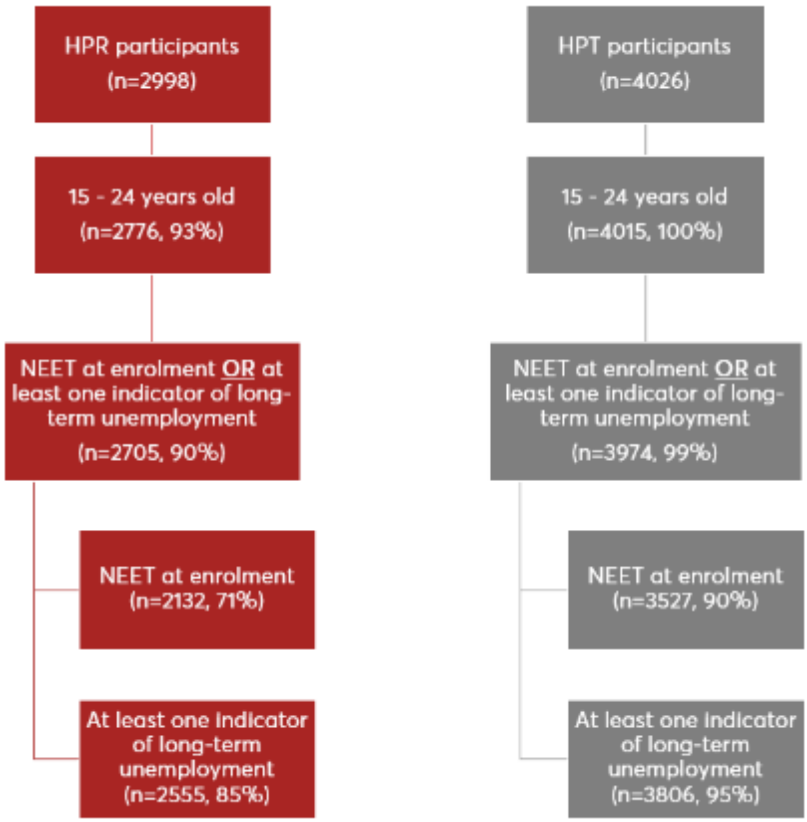
Additionally, 71 percent and 90 percent of HPR and HPT participants, respectively, were aged between 15 and 24 years and were NEET at enrolment. Further, 85 percent and 95 percent of HPR and HPT participants, respectively, were in this age group and were likely to experience long-term unemployment as defined above. These results are summarised in Figure 4 below.

These results show that both HPR and HPT are enrolling high proportions of participants who the programmes were originally designed to support in making progress towards employment and positive life outcomes. It was more common that HPR participants were outside the target age range and/or in employment, education or training at enrolment compared to HPT. This is likely a reflection of the different referral pathways used for the programmes.

HPR providers enrol rangatahi based on their local knowledge but in some cases, these rangatahi may not necessarily fit the prescribed eligibility criterion. For example, some HPR providers enrol younger rangatahi who are facing challenges (but may still be at school) to prevent them from becoming further disengaged and/or NEET. This is consistent with the HPR participant age distribution being skewed towards younger rangatahi (see Figure 3). Although local knowledge is also used to refer taitamariki to HPT, many participants are referred directly through MSD when they apply for a main benefit.

[23] This may include caregivers and people with disabilities or health conditions.

Figure 4: Proportion of HPR and HPT participants who met criterion



He Poutama Rangatahi and He Poutama Taitamariki contributed to improved employment, education and training outcomes for rangatahi

Using HPR and HPT participants linked to the IDI, we tracked the outcomes for those who enrolled between 2018 and 2019 and compared these to similar rangatahi who had not participated in the pilot programmes. Although the group of similar rangatahi did not participate in the programmes, they may have received other standard MSD support. The impact is therefore above and beyond other forms of assistance offered by MSD or others.

More specifically, those participating in HPR (n=561) and HPT (n=891) between 2018 and 2019 were matched to comparable rangatahi based on individual-level data such as key demographics and previous life events such as benefit receipt, engagement with EET, engagement with social housing, criminal convictions and interactions with mental health services. Of these, 510 HPR and 828 HPT participants were successfully matched.[24]

[24] See further details in Appendix A.

The employment, education and training impact was over and above what would have been achieved without He Poutama Rangatahi and He Poutama Taitamariki

We estimated the impact of the HPR and HPT pilot up to 24 months after enrolment on the proportion of rangatahi who were engaged in EET.

Figures 5 and 6 show the proportion of participants in HPR and HPT engaged in EET compared to similar non-participants each month before and after enrolment. These figures present the proportion of rangatahi in EET in the 24 months leading up to enrolment, ensuring there were no statistically significant differences between the programme participants and the matched comparison groups.

Figure 5: Proportion of HPR participants (treatment) and matched comparison group (comparison) in employment, education or training before and after programme enrolment, by month

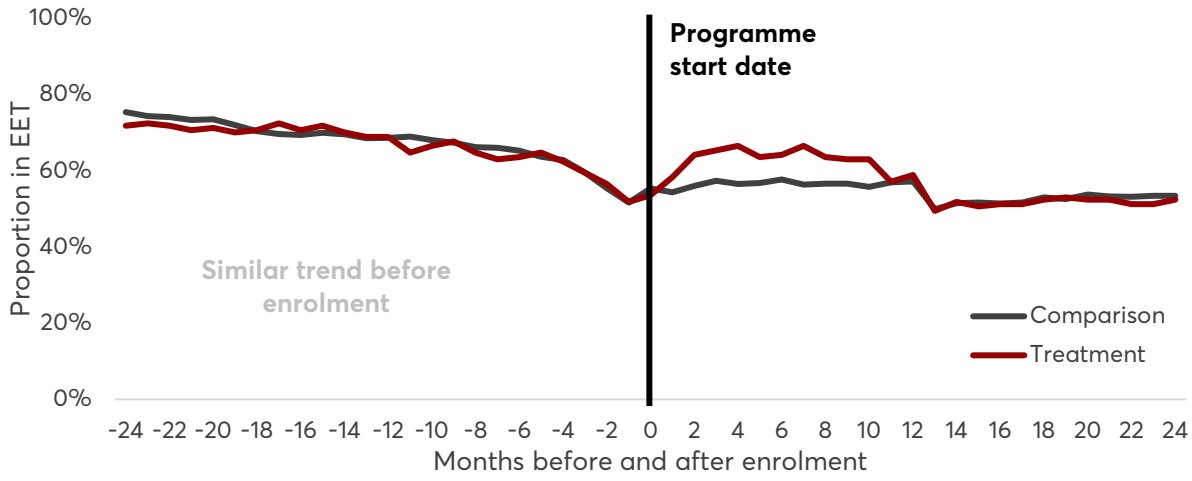
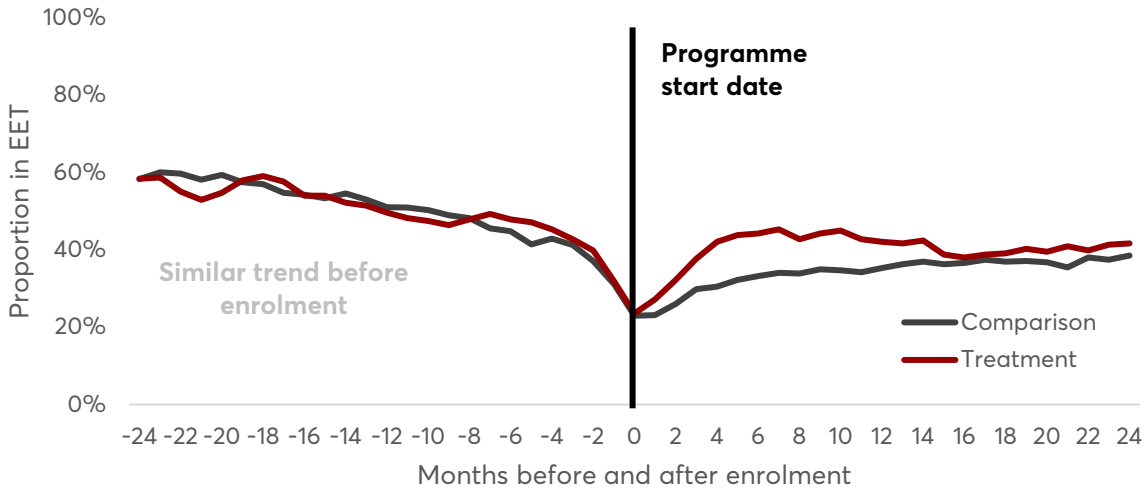


Figure 6: Proportion of HPT participants (treatment) and matched comparison group (comparison) in employment, education or training before and after programme enrolment, by month



After enrolment, a sharp increase in the proportion of participants engaged in EET is evident, but this decreases over time. From approximately 10 months onwards, the

proportion of HPR participants in EET is similar to the comparison group (Figure 5). For HPT, the proportion is similar from approximately 14 months onwards.

We measured EET outcomes from enrolment to 6, 12 and 24 months after to summarise the collective programme impact on EET. Table 2 below shows the average value of the outcome for participants and similar non-participants over the specified time period, with the associated standard errors and 95 percent confidence intervals calculated from 100 bootstrapped iterations. Mean differences (impact estimate) with a 95 percent confidence interval that did not overlap with 0 were deemed statistically significant at an alpha=0.05 level.[25]

Table 2: Impact estimates on employment, education and training outcomes for HPR and HPT participants (treatment) and similar non-participants (comparison)

Periods of time from enrolment	Mean - Comparison group	Mean - Treatment group	Mean difference (impact estimate)	Standard error	95% confidence intervals	
He Poutama Rangatahi						
0 to 6 months	56.1%	62.5%	6.4%**	2.0%	2.5%	10.3%
0 to 12 months	56.3%	62.3%	6.0%**	1.8%	2.4%	7.8%
0 to 24 months	54.4%	57.3%	2.9%	1.8%	-0.8%	6.6%
He Poutama Taitamariki						
0 to 6 months	28.3%	36.0%	7.7%**	2.5%	2.9%	12.5%
0 to 12 months	31.1%	39.6%	8.4%**	2.5%	3.6%	13.3%
0 to 24 months	34.0%	39.9%	6.0%**	2.3%	1.5%	10.5%

Note: ** = statistically significant results

Table 2 shows the proportion of HPR and HPT participants engaged in EET 6 months after enrolment was, on average, 62.5 percent and 36.0 percent, compared to 56.1 percent and 28.3 percent of similar non-participants respectively. This represents a difference of 6.4 (± 3.9) percentage points for HPR participants and 7.7 (± 4.9) percentage points for HPT participants who were engaged in EET 6 months after enrolment.

In other words, the proportion of HPR and HPT participants engaged in EET 6 months after enrolment was significantly higher than similar non-participants, suggesting that both programmes achieved improved EET outcomes that would not have been achieved without the programmes. These net gains are also statistically significant for HPT up to 24 months after enrolment. For HPR, the net gains are statistically significant 12 months after enrolment, but not 24 months after enrolment. This may be due to the HPT cohort being slighter older (c.f. Figure 3) than the HPR cohort.

[25] See Appendix A for more details.

The benefits of the pilot programmes on employment were not sustained and did not contribute to sustained employment, at least for those enrolled between 2018 and 2019.

For a beneficial sustained impact due to the programmes, we would expect an increased proportion of participants in employment over and above similar non-participants to be maintained for at least 24 months after enrolment and beyond.

Figures 7 and 8 show the proportion of HPR and HPT participants engaged in employment (rather than EET as above) compared to similar non-participants each month before and after enrolment. Again, a sharp increase in the proportion of participants engaged in employment after enrolment, over and above the comparison group, is observed. However, the impact decreases over time, with similar proportions engaged in employment 24 months after enrolment.

Figure 7: Proportion of HPR participants (treatment) and matched comparison group (comparison) in employment by month before and after enrolment

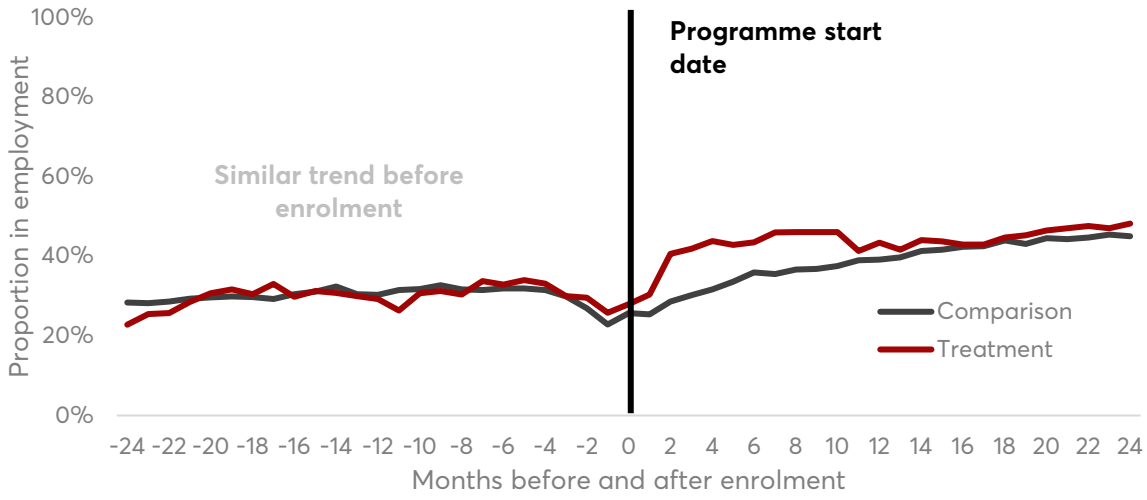
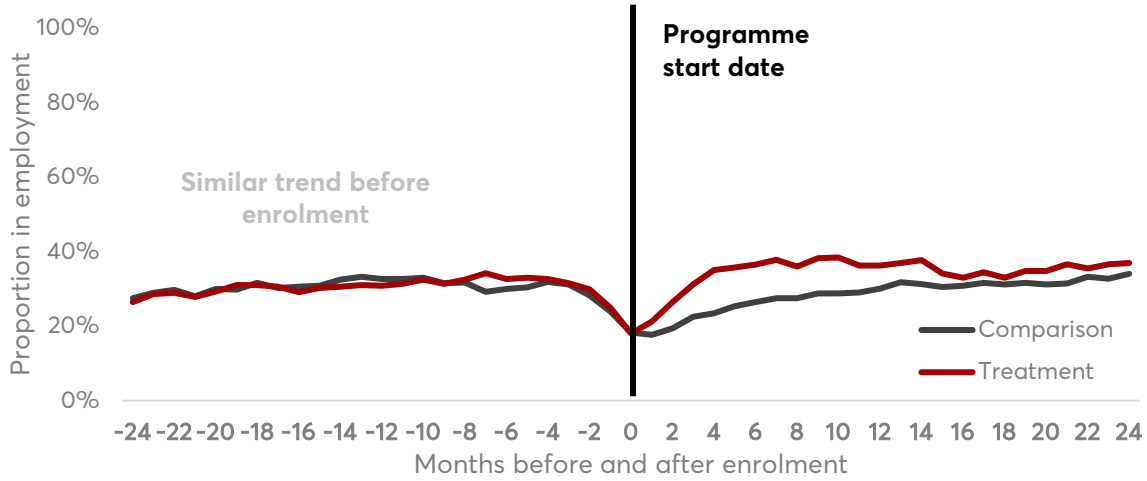


Figure 8: Proportion of HPT participants (treatment) and matched comparison group (comparison) in employment by month before and after enrolment



Rather than estimating the impact from enrolment, we measured employment outcomes in 6-monthly periods after enrolment to assess the time-dependent nature of engagement in employment. Table 3 below presents these 6-monthly impact estimates. The estimate for 19 to 24 months after enrolment is used to assess longer-term employment impact (i.e. sustained benefits of employment).

The programmes were also expected to increase the proportion of participants who were in sustained employment, defined as being in continuous employment for 6 months.[26] Participants were therefore considered to be in sustained employment each month if they were employed that month and the previous 5 months. The proportion of those in sustained employment was averaged over 0 to 24 months after enrolment to summarise the collective effect of the programmes.

Table 3. Impact estimates on employment outcomes for HPR and HPT participants (treatment) and similar non-participants (comparison)

	Periods of time from enrolment	Mean - Comparison group	Mean - Treatment group	Mean difference (impact estimate)	SE	95% confidence intervals	
	He Poutama Rangatahi						
Proportion in employment	0 to 6 months	30.1%	38.6%	8.4%**	2.0%	4.5%	12.4%
	7 to 12 months	37.5%	44.7%	7.2%**	2.1%	3.1%	11.3%
	13 to 18 months	41.9%	43.4%	1.5%	2.7%	-3.8%	6.8%
	19 to 24 months	44.5%	47.0%	2.5%	2.7%	-2.8%	7.8%
Proportion in sustained employment	0 to 24 months	22.6%	21.3%	-1.3%	1.8%	-4.8%	2.2%
	He Poutama Taitamariki						
Proportion in employment	0 to 6 months	21.9%	29.1%	7.2%**	2.3%	2.8%	11.7%
	7 to 12 months	28.5%	37.1%	8.6%**	2.8%	3.1%	14.0%
	13 to 18 months	31.2%	35.0%	3.8%	3.0%	-2.2%	9.7%
	19 to 24 months	32.4%	35.9%	3.5%	3.1%	-2.6%	9.6%
Proportion in sustained employment	0 to 24 months	15.2%	17.2%	2.0%	1.7%	-1.3%	5.3%

Note ** = statistically significant results

Table 3 shows the proportion of HPR and HPT participants in employment 19 to 24 months after enrolment was not statistically different compared to similar non-participants, suggesting the pilot programmes (2018-2019) did not contribute to sustained employment benefits over time. Additionally, the proportion of HPR and HPT

[26] This measure is different to MSD's measure of sustained employment used in its operational reporting. The MSD measure is based on Income Support data only and counts sustained employment as an exit from main benefit to 26 weeks of continuous employment. This excludes part-time work while on a main benefit and can only be applied to people on a main benefit at the start of the programme. For these reasons, the measure defined using IDI data is preferable.

participants in sustained employment 24 months after enrolment was not statistically different compared to similar non-participants, suggesting the pilot programmes (2018-2019) did not contribute to improved sustained employment.

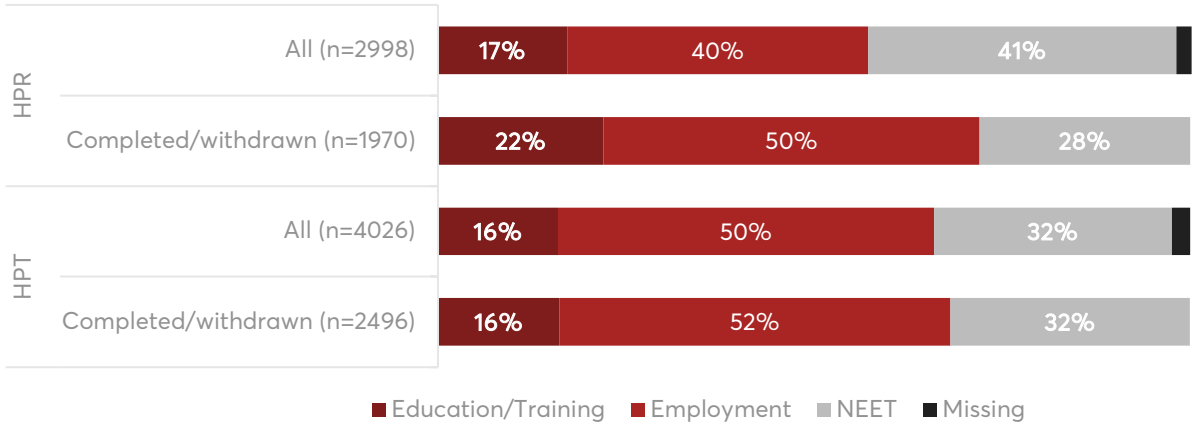
The majority of HPR and HPT participants achieved an EET outcome by the end of receiving their support.

HPR and HPT also collect information on the EET outcomes achieved by participants while they are enrolled in the programmes. This includes engagement in education or training, temporary work or permanent employment. This data provides supporting evidence for the programmes' success in short-term EET engagement, as demonstrated by significantly higher proportions of participants engaged in EET compared to similar non-participants up to 12 months after enrolment.

Additionally, this programme data represents more recent HPR participants (those enrolled with providers active since 2020) and HPT participants enrolled from 2018 to 2022, compared to the earlier cohorts available through the IDI. However, this data is without a counterfactual, so we cannot attribute these achievements to participation in the programmes alone.

Nonetheless, the data showed 57 percent of HPR participants and 66 percent of HPT participants achieved an EET outcome during the programme.[27] These percentages include rangatahi who were still actively participating in the programmes and who therefore may still have been working towards their goals. If we include only those rangatahi who have completed their support or withdrawn from the programmes, the percentage increases: 72 percent of HPR participants and 68 percent of HPT participants achieved an EET outcome.

Figure 9: Proportions of HPR and HPT participants being placed into EET during the programme, comparing rates for all participants with those who have finished the programme (completed/withdrew)



[27] HPT outcome data is provided longitudinally every month after enrolment. Prioritised EET outcomes across all months after enrolment are used. These are prioritised as 1. Employment, 2. Education/training, 3. NEET. For example, if a participant was employed in month 2 but NEET in month 8, then they are counted as having achieved an employment outcome during the programme.

Demographic information collected by the programmes about participants upon enrolment allow short-term EET outcomes to be compared across key participant subgroups such as ethnicity, gender and age. Comparing short-term EET outcomes achieved within the programmes provides insight into whether equitable opportunities were provided for all participants. Table 4 presents the rates of placement into EET during the programmes for these subgroups of interest.

Table 4: Rate of placements into employment, education and training by key subgroups

Specific cohorts of enrolled participants	HPR		HPT	
	Māori	**Non-Māori**	**Māori**	**Non-Māori**
All participants	57% (n=2489)	61% (n=509)	65% (n=3048)	70% (n=978)
Completed programme or withdrawn	70% (n=1657)	79% (n=313)	67% (n=1887)	72% (n=609)
	Pacific	**Non-Pacific**	**Pacific**	**Non-Pacific**
All participants	68% (n=353)	56% (n=2645)	67% (n=254)	66% (n=3772)
Completed programme or withdrawn	80% (n=218)	71% (n=1752)	68% (n= 165)	68% (n=2331)
	15–17 years	**18–24 years**	**15–17 years**	**18–24 years**
All participants	56% (n=1266)	63% (n=1227)	78% (n=382)	65% (n=3643)
Completed programme or withdrawn	74% (n=796)	73% (n=862)	77% (n=275)	67% (n=2221)
	Male	**Female**	**Male**	**Female**
All participants	62% (n=1675)	52% (n=1298)	66% (n=2106)	66% (n=1906)
Completed programme or withdrawn	76% (n=1129)	66% (n=828)	68% (n=1336)	68% (n=1152)

There were no statistically significant differences in the rate of placements into EET during delivery for Māori compared to non-Māori.

We considered participants to be Māori or Pacific if they indicated that they identified as Māori or Pacific upon enrolment, respectively. Therefore, non-Māori and non-Pacific are those who did not indicate they identified with these ethnic groups upon enrolment. Participants who indicated they identified with both Māori and Pacific are counted in both of these groups presented in Table 4.

We applied a linear regression to test the relationship between ethnicity and being placed into EET during the programmes, while controlling for other confounding variables.[28] Although the rate of placements into EET was lower for Māori compared to non-Māori (see Table 4), the regression analysis showed there were no statistically

[28] See Appendix xx for more details.

significant differences across both programmes.[29] This demonstrates that HPR and HPT provided equitable EET opportunities for Māori during delivery.

Pacific HPR participants were more likely to be placed into EET during delivery compared to non-Pacific.

Regression analysis showed Pacific HPR participants were more likely to be placed into EET compared to non-Pacific.[30] This result is interesting, while Pacific rangatahi made up only 12 percent of HPR participants, the programme was successful in helping these rangatahi achieve their EET goals. For HPT this relationship was not statistically significant.

Younger HPT participants were more likely to be placed into EET during delivery.

The relationship between age and placement into EET is statistically significant for HPT but not HPR. Regression analysis showed that younger HPT participants were more likely to be placed into EET.[31] This may reflect the success of the specialist support HPT employs for the younger cohort and the programme's recognition that younger participants have different needs compared to older ones. For HPR, no significant relationship was found with age after accounting for additional variables, particularly whether the individual had completed or withdrawn from the programme.

Male HPR participants were more likely to be placed into EET during delivery.

It was also found that male HPR participants were more likely to be placed into EET compared to females.[32] Further, males were more likely to be placed into employment rather than education or training compared to females.[33] This result suggests the employment opportunities provided by HPR may be better suited to males. Interestingly, of those placed into employment, the most common industries were agriculture, forestry and fishing, and construction. Gender was not significant for HPT.

Participants who experienced indicators of long-term unemployment were less likely to be placed into EET during delivery.

It was also found that HPR rangatahi who had either one of the following indicators of long-term unemployment at enrolment were less likely to be placed into EET: supported by a benefit, no qualification, had dependents or did not have a driver licence.[34]

For HPT, similar patterns were found whereby taitamariki who had either one of the following indicators of long-term unemployment at enrolment were less likely to be placed into EET: no qualification, expulsions or suspensions, no driver licence, a learner

[29] HPR OR=0.96 (95% CI: 0.74, 1.24, df=2409), HPT OR=0.87 (95% CI: 0.72, 1.05, df=3299). See Appendix D Table 19 and 21.
[30] OR=1.63 (95% CI: 1.21, 2.21, df=2409). See Appendix D, Table 19.
[31] OR=0.85 (95% CI: 0.82, 0.88, df=3266). See Appendix D Table 21.
[32] OR=1.35 (95% CI: 1.12, 1.64, df=2409). See Appendix D Table 19.
[33] OR=1.30 (95% CI: 1.00, 1.65, df=1429). See Appendix D Table 18.
[34] Qualification OR=0.62 (95% CI: 0.50, 0.77, df=2409), Dependents OR=0.62 (95% CI: 0.43, 0.88, df=2409), No driver license OR=0.51 (95% CI: 0.27, 0.94, df=2409). See Appendix D Table 19.

licence or dependents.[35] Additionally, total score,[36] representing ability to sustain employment, was found to be predictive of EET outcomes with a higher score at enrolment indicating a higher likelihood of being placed into EET.

He Poutama Rangatahi and He Poutama Taitamariki contributed to reduced benefit receipt

The impact of the pilot programmes on benefit receipt was over and above what would have been achieved without them up to 12 months after enrolment.

The programmes were expected to reduce benefit receipt along with increased engagement in EET. Similarly to EET, we measured benefit outcomes for those enrolled between 2018 and 2019. These were measured from enrolment to 6, 12 and 24 months after enrolment to summarise the collective impact of the pilot programmes on benefit receipt. These are summarised in Table 5 below.

Table 5: Impact estimates on benefit outcomes for HPR and HPT participants (treatment) and similar non-participants (comparison)

Periods of time from enrolment	Mean – Comparison group	Mean - Treatment group	Mean difference (impact estimate)	Standard Error	95% confidence intervals	
He Poutama Rangatahi						
0 to 6 months	50.5%	41.8%	-8.7%**	3.4%	-15.4%	-2.1%
0 to 12 months	47.2%	39.0%	-8.2%**	2.7%	-13.4%	-2.9%
0 to 24 months	43.1%	39.3%	-3.8%	2.4%	-8.6%	1.0%
He Poutama Taitamariki						
0 to 6 months	75.5%	72.1%	-3.4%	2.4%	-8.1%	1.3%
0 to 12 months	70.4%	65.0%	-5.3%**	2.6%	-10.5%	-0.1%
0 to 24 months	67.1%	62.5%	-4.6%	2.7%	-9.9%	0.8%

Note: ** = statistically significant results

The proportion of HPR participants (aged 18 or over) on a main benefit was significantly lower than similar non-participants 6 and 12 months after enrolment. More specifically, when compared to similar non-participants, the proportion of HPR participants on a main benefit was 8.7 (± 6.6) percentage points lower 6 months after enrolment and 8.2 (± 5.3) percentage points lower at 12 months after enrolment.

[35] Qualifications OR=0.75 (95% CI: 0.63, 0.90, df=2409), Expulsions/Suspensions OR=0.84 (95% CI: 0.71, 0.99, df=2409), No driver licence OR=0.68 (95% CI: 0.49, 0.94, df=2409), Learner licence OR=0.61 (95% CI: 0.45, 0.83, df=2409), Primary caregiver OR=0.65 (95% CI: 0.50, 0.85, df=2409). See Appendix D Table 21.
[36] See Appendix C for more details.

For HPT, the proportion of HPT participants (aged 18 or over) on a main benefit was significantly lower than the similar non-participants 12 months after enrolment. More specifically, the proportion of participants on 5.3 (± 5.1) percentage points lower at 12 months after enrolment.

These impact estimates are statistically significant for both programmes up to 12 months after enrolment, but not thereafter, indicating the net reduction in benefit receipt was not sustained. HPR and HPT participants who enrolled in 2018-2019 eventually received benefits at a rate similar to similar non-participants. This decrease over time is demonstrated in Figures 10 and 11 below.[37]

Figure 10: Proportion of HPR participants aged 18 or over and matched comparison group on a main benefit by month before and after enrolment

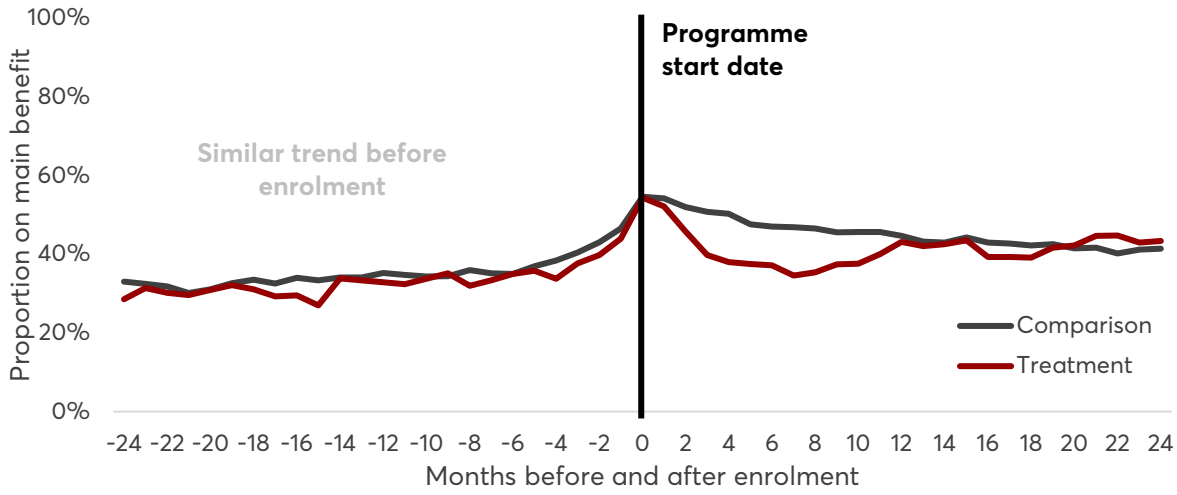
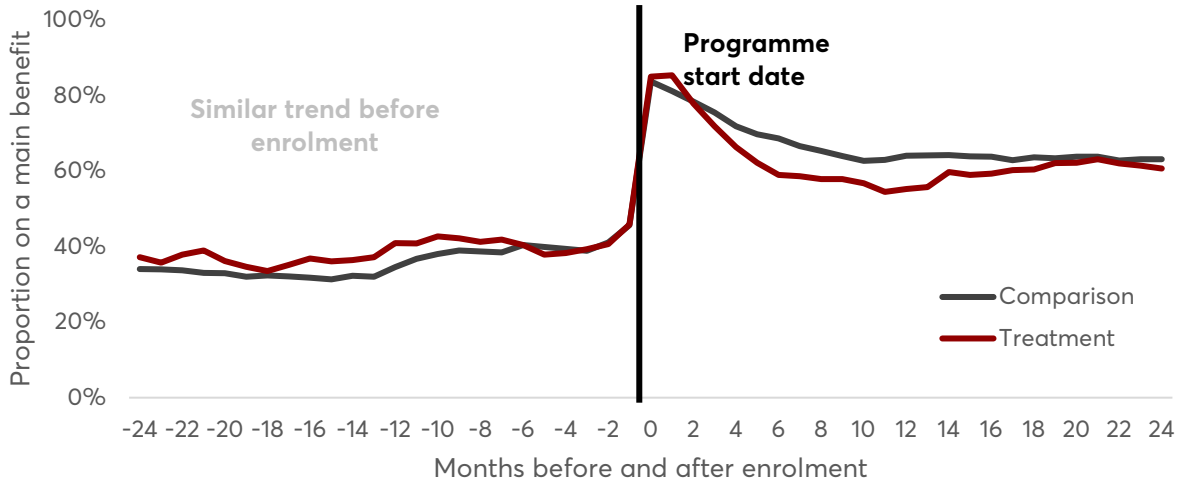


Figure 11: Proportion of HPT participants aged 18 or over and matched comparison group on a main benefit by month before and after enrolment



[37] While the proportion of the HPT participants on a benefit before enrolment appears higher compared to the comparison group in Figure 11, the difference is not statistically significant. See Appendix A for the benefit measures examined during balancing.

Figures 10 and 11 also demonstrate the difference in the proportion of participants who were on a benefit at enrolment between the two programmes. At enrolment, 55 percent of HPR participants were on a benefit compared to 85 percent of HPT participants.

This is further supported by programme data, where 29 percent of HPR participants who enrolled with a provider active since 2020 were receiving a benefit at enrolment, compared to 67 percent of HPT participants who enrolled from 2018 to 2022.

This highlights the relationship between participation in HPT and being on a benefit. As HPT is managed by MSD (rather than through HPR community providers) the majority of participants are taitamariki in Te Tai Tokerau receiving a main benefit, who are automatically referred to the programme.

He Poutama Rangatahi and He Poutama Taitamariki did not contribute to reduced interactions with corrections, however very few participants had these interactions.

The programmes were also expected to achieve wider benefits such as reduced interactions with corrections. This was defined as being in prison, in remand, on home detention or sentenced with community work. Again, we measured corrections outcomes from enrolment to 6, 12 and 24 months after to measure the collective effect of the programme impact on corrections interactions. These are summarised in Table 6 below.

Table 6. Impact estimates on corrections outcomes for rangatahi participating in HPR and HPT (treatment) and similar non-participating rangatahi (comparison)

Periods of time from enrolment	Mean – Comparison group	Mean - Treatment group	Mean difference (impact estimate)	Standard Error	95% Confidence Intervals	
He Poutama Rangatahi						
0 to 6 months	3.3%	5.0%	1.7%	1.2%	-0.7%	4.2%
0 to 12 months	3.6%	5.3%	1.7%	1.3%	-0.7%	4.2%
0 to 24 months	4.1%	5.3%	1.2%	1.2%	-1.1%	3.5%
He Poutama Taitamariki						
0 to 6 months	7.2%	6.7%	-0.6%	1.8%	-4.0%	2.8%
0 to 12 months	7.4%	6.8%	-0.6%	1.7%	-3.8%	2.7%
0 to 24 months	7.5%	7.3%	-0.2%	1.5%	-3.2%	2.8%

Note:** = statistically significant results

Table 6 shows the proportion of HPR and HPT participants in prison, remand, home detention or sentenced with community work was not significantly different compared to similar non-participants 6, 12 and 24 months after enrolment. Although this suggests there were no net reductions in corrections interactions, this is not surprising as the proportion of those with these interactions were low (less than 7.5 percent).

KEQ2: How well and to what extent have rangatahi participating in He Poutama Rangatahi and He Poutama Taitamariki progressed on a pathway, overcoming barriers towards positive life outcomes?

Information about participant progression is available through programme data, albeit in different ways. HPR collects information about the intermediary activities participants have completed, whereas HPT administers a three-monthly questionnaire that measures overall ability to sustain employment.

We analysed these data to investigate to what extent participants are progressing on a pathway towards positive life outcomes. For HPR, summary statistics and regression analysis are used to help understand activities commonly offered and completed, and whether this was different across key participant subgroups. Pre-post analysis on HPT participant progression in their ability to sustain employment is conducted using paired t-tests, and these are further broken down for key participant subgroups.

He Poutama Rangatahi enabled a pathway towards positive life outcomes by offering various intermediary activities

HPR providers collect information on outputs completed by rangatahi. Outputs are defined as the intermediary activities accomplished by participants during the programme. They include a variety of activities such as creating a CV, developing cultural connections and getting a first aid certificate.

These intermediary activities theoretically improve work-readiness, social and cultural connectedness and wellbeing and therefore progress rangatahi along a pathway towards positive life outcomes, for example, gaining employment that is of interest and relevant to rangatahi.

Across the 61 active HPR providers with available output data, over 500 unique outputs were recorded (including alternative spellings of similar outputs). To assist with our analysis, these were coded into 11 broad themes:[38]

- **Work readiness activities** e.g. creating a CV, writing a cover letter, interview skills, career plan
- **NCEA** e.g. gaining credits
- **Life essentials** e.g. setting up a bank account, IRD number, passport
- **Qualifications** e.g. first aid certificate, food safety certificate

[38] See Appendix B for details on how outputs were coded to broad themes.

- **Industry-specific training** e.g. forklift endorsement, scaffolding training, farming project
- **Cultural connection activities** e.g. learning karakia, haka and pepeha, registering with iwi, visiting marae
- **Soft skills** e.g. developing communication skills, time management training
- **Driver licence** e.g. getting learner/restricted/full licence
- **Wellbeing** e.g. individual counselling, drug and alcohol support, gym membership
- **Work experience** e.g. participating in community workshops, volunteering
- **Pastoral care** e.g. has received ongoing pastoral care (manaaki tangata) for 6 months

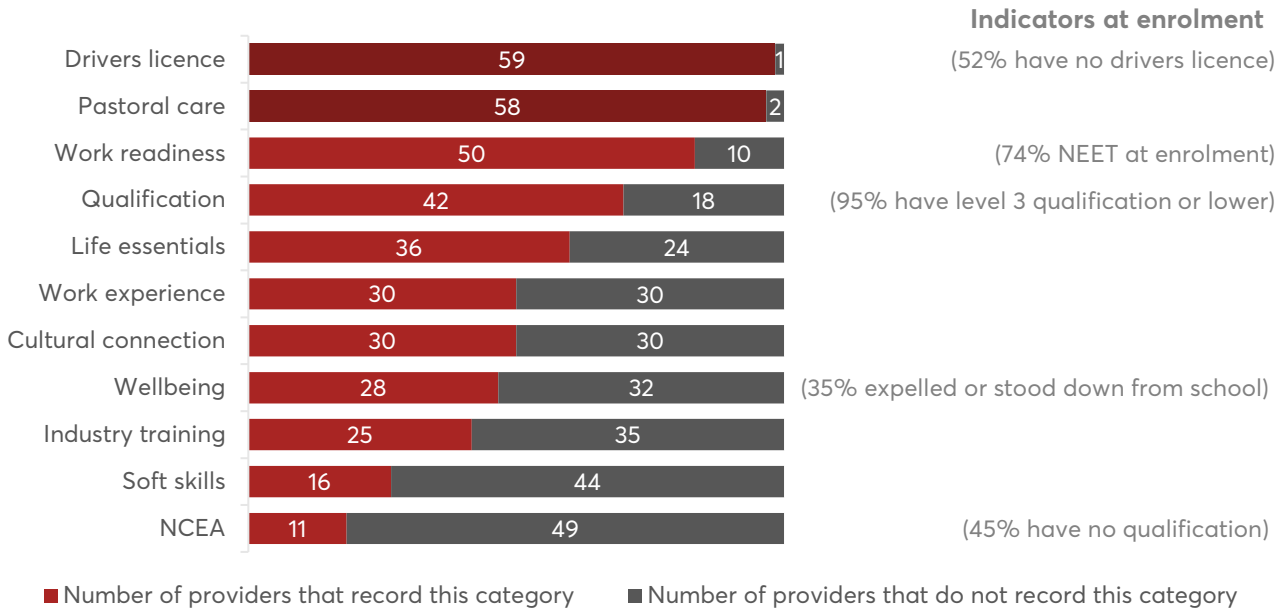
The most common activities being offered to He Poutama Rangatahi participants were driver licencing, pastoral care, work readiness and qualifications.

Figure 12 below shows the output categories that were most commonly recorded (and therefore offered to rangatahi) by providers.

Driver licencing and pastoral care was in most cases recorded by default, indicating the programme prioritised the offering of these activities to rangatahi (or at least the recording of these activities). Work readiness was the next most recorded by 50 out of the 60 providers, followed by qualifications, life essentials and work experience.

These activities align well with participant needs, as the most common barriers faced by participants were low qualifications and not having a driver licence (see Figure 12).

Figure 12: Number of providers that recorded each activity theme and therefore offered the activity theme to participants



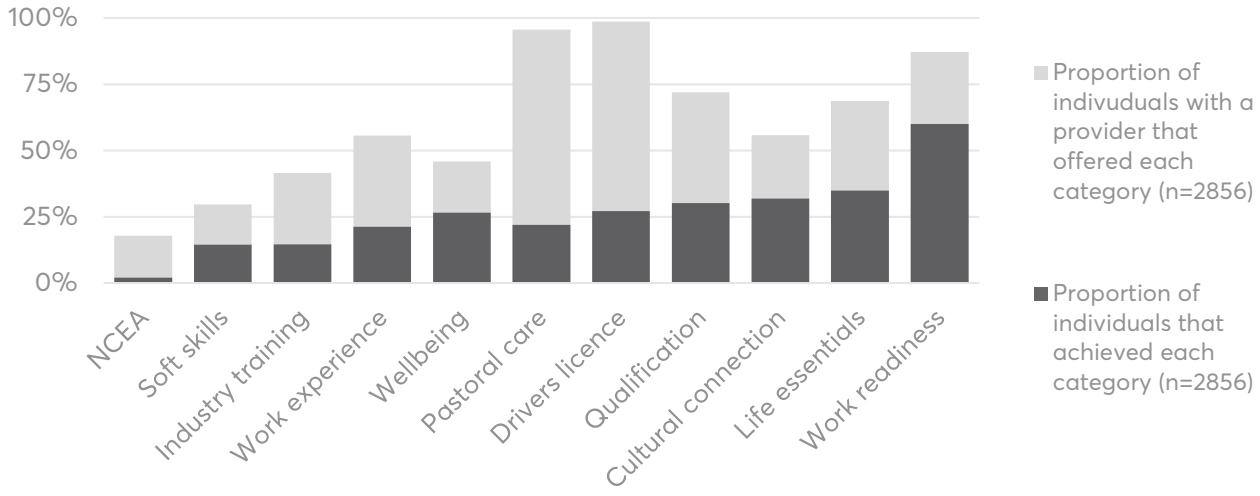
Note: Where relevant, activity themes have been aligned to participant needs based on indicators of long-term unemployment collected at enrolment. One provider did not record any output categories. Driver licence and pastoral care are also recorded by default for most providers.

The most common activities being completed by He Poutama Rangatahi participants were work readiness and life essentials aligning with participant needs.

Figure 13 shows the proportion of activities being achieved by all participants in relation to the proportion of activities being offered.

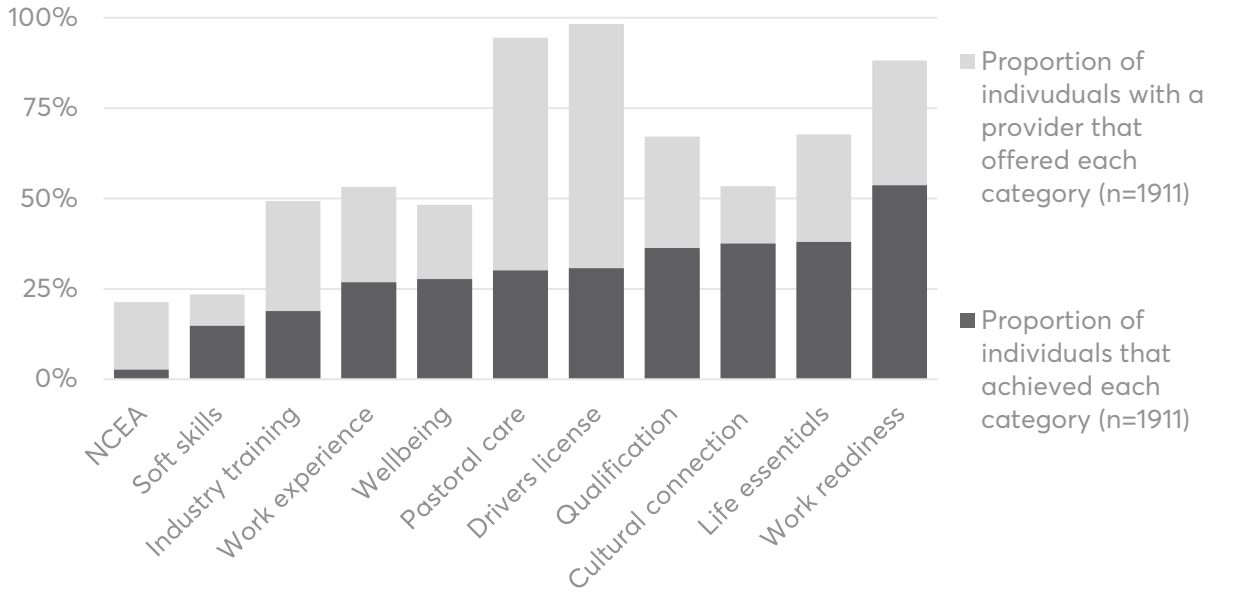
Generally, activities that were more commonly offered by providers were also more commonly achieved by participants. The exception is driver licencing and pastoral care, due to these being recorded by default. Work readiness was the most common activity achieved by participants (47 percent), followed by life essentials (35 percent), cultural connection (32 percent) and qualifications (30 percent). Again, these align well with participant needs. It is worth noting that tangible outputs (e.g. creating a CV) are better suited for monitoring and are therefore easier for providers to record as being completed, compared to outputs related to soft skills and wellbeing. These results are shown in Figure 13 below.

Figure 13: Proportion of participants who achieved each category in relation to the proportion of individuals with a provider that recorded each category (all participants)



These percentages increase slightly when excluding participants that were still actively participating in the programme (when the data was captured) and therefore may still be working towards completing activities, as shown in Figure 14. Work readiness (54 percent), life essentials (38 percent), cultural activities (38 percent) and qualifications (36 percent) are the most commonly completed activities of those who have completed or withdrawn from the programme. Further, of those who completed or withdrew from the programme, 28 percent and 30 percent completed wellbeing related activities and pastoral care, respectively.

Figure 14: Proportion of participants who achieved each category in relation to the proportion of participants with a provider that recorded each category (completed/withdrawn participants)

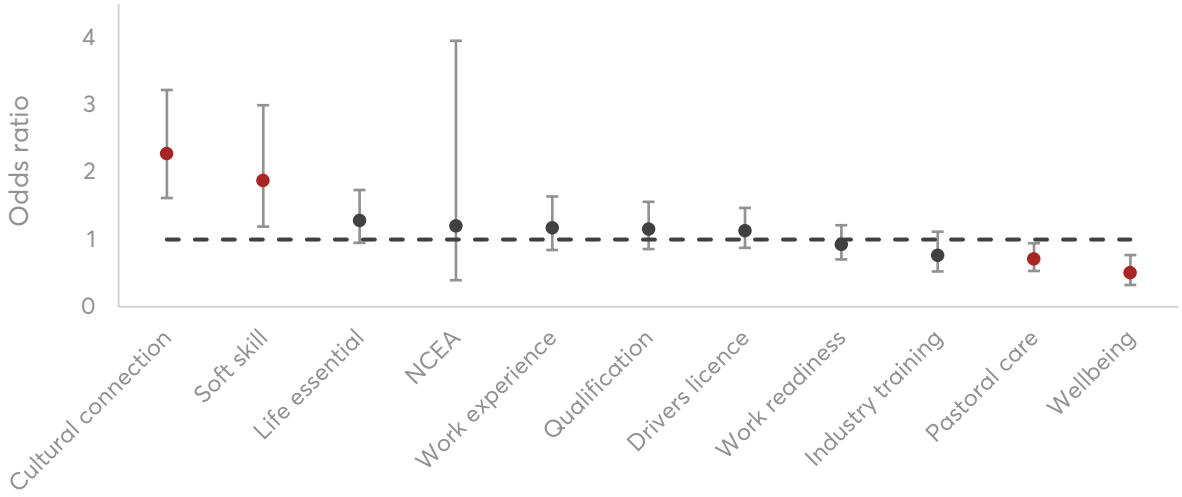


Māori participants were more likely to complete cultural connection and soft-skill activities and less likely to complete wellbeing activities compared to non-Māori.

Regression techniques were used to assess if there were significant differences between Māori and non-Māori participants with respect to achieving different outputs, while also controlling for other relevant variables.[39]

We observed that the odds of achieving a cultural connection and or soft-skill activity was greater for Māori compared to non-Māori.[40] Additionally, the odds of Māori achieving pastoral care and wellbeing-related outputs were lower compared to non-Māori.[41]

Figure 15: Estimated odds of Māori completing outputs compared to non-Māori (95% confidence interval error bars, red dots representing statistically significant result)



Pacific participants were more likely to complete life essentials, soft skills, wellbeing, work readiness and cultural connection activities compared to non-Pacific.

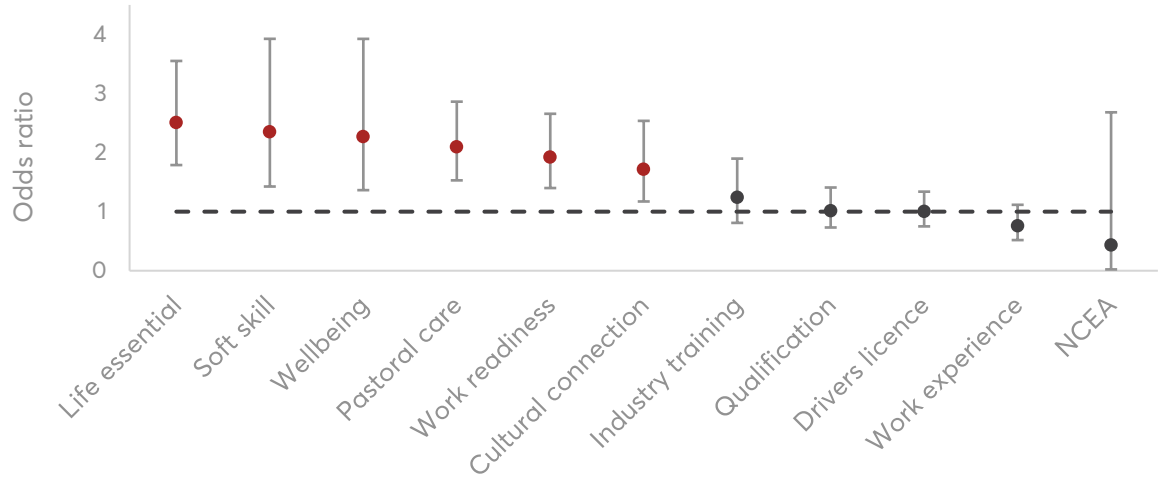
Similar regression techniques were also used to assess if there were significant differences between Pacific and non-Pacific participants with respect to achieving outputs.[27]

We observed that the odds of achieving a life essential, soft skill, wellbeing, pastoral care, work readiness or culture connection related output were greater for Pacific compared to non-Pacific participants.[42]

[39] Logistic regression models were developed for each output category, with the estimates for Māori and Pacific combined for comparison. See Appendix D tables A22 to A33 for full results.
[40] Cultural output: Māori OR = 2.28 (95% CI: 1.62, 3.22, df=1386), Soft-skill output: Māori OR = 1.88 (95% CI: 1.19, 3.00, df=760), see Appendix D, Tables A27, A28.
[41] Pastoral care output: Māori OR = 0.71 (95% CI: 0.53, 0.95, df=2308), Wellbeing output: Māori OR = 0.51 (95% CI: 0.33, 0.77, df=1005), see Appendix D, Tables A30, A31.
[42] Life essential output: Pacific OR = 2.5 (95% CI: 1.79, 3.55, df=1694) , Soft skill output: Pacific OR = 2.35 (95% CI: 1.42, 3.93, df=760), Wellbeing output: Pacific OR = 2.27 (95% CI: 1.36, 3.93, df=1005), Pastoral care output: Pacific OR = 2.10 (95% CI: 1.53, 2.86, df=2308), Work readiness output: Pacific OR = 1.92 (95% CI: 1.40, 2.66, df=1996), Cultural output: Pacific OR = 1.75 (95% CI: 1.17, 2.54, df=1386), see Appendix D for full tables.

This finding aligns with the finding that Pacific participants are more likely to achieve employment outcomes compared to non-Pacific. It suggests a positive relationship between completing the activities offered by HPR providers and gaining employment.

Figure 16: Estimated odds of Pacific completing outputs compared to non-Pacific (95% confidence interval error bars, red dots representing statistically significant result)



He Poutama Taitamariki participants made progress in their ability to sustain employment

A youth employment pathway questionnaire was designed by Standard of Proof and MBIE in 2017.[43,44] It was developed firstly to assist in understanding the strengths of taitamariki and to identify areas requiring further support, and secondly to measure and track progress towards sustained employment over time. Although education and training outcomes are also relevant goals for participating taitamariki, sustaining employment was a key area of focus when the programme and questionnaire were originally designed.

As such, the questionnaire contains 20 self-assessed indicators, each focused on one factor that is likely to limit their ability to access and retain employment. These indicators are:[45]

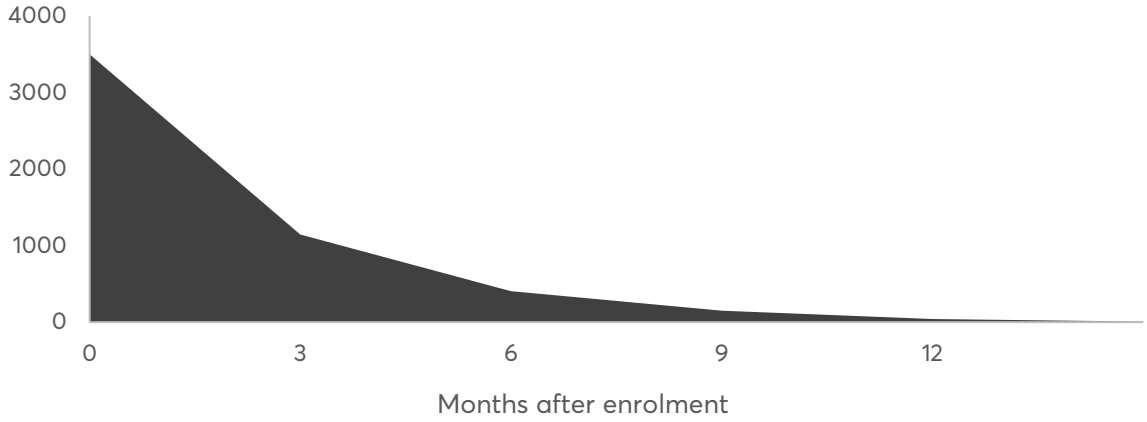
- **Attitude to working:** the extent to which taitamariki prioritise getting and keeping a job.
- **Learning new skills:** the extent to which taitamariki are comfortable and open to learning new skills and taking on challenges.
- **Literacy:** the extent to which taitamariki are able to read, process and synthesise documents and text.

[43] This questionnaire is also known as the Sense of Belonging and Pathway for Individual Development, Engagement and Respect for Self (SPIDER) self-assessment tool. Throughout this section it is referred to as the 'youth employment pathway questionnaire' or 'questionnaire'.
[44] Standard of Proof (2021). Youth Employment Pathway questionnaire 2.0: psychometric properties of a preliminary scale measuring the ability to obtain and retain employment.
[45] See Appendix C Table A9 and A10 for the questionnaire the response options for each indicator.

- **Relevant training:** the amount of relevant training completed for their desired job.
- **Work experience:** the amount of work experience taitamariki have.
- **Working with others**: the extent to which taitamariki are comfortable working with others and in teams.
- **Personal management:** the extent to which taitamariki are on time, show up and complete tasks.
- **Challenging situations:** the extent to which taitamariki are able to find solutions to challenges.
- **Economic obstacles:** the extent to which economic obstacles, such as benefit requirements and the costs associated with working (e.g. materials and transport) are stopping taitamariki from getting a job.
- **Job opportunities:** the extent to which relevant and accessible job opportunities are available to taitamariki.
- **Housing situation:** whether or not taitamariki have a safe home.
- **Influential people:** the extent to which the most influential people around taitamariki support them in getting and keeping a job.
- **Physical health:** the extent to which taitamariki are fit for the physical activities required for work.
- **Broader health:** the extent to which taitamariki face mental health issues and symptoms.
- **Alcohol or drugs:** the frequency in which taitamariki consume alcohol or drugs.
- **Sense of belonging:** the extent to which taitamariki feel a sense of belonging in their community.
- **Caretaking:** the extent to which taitamariki have adequate and reliable support for their caretaking responsibilities, if applicable.
- **Confidence:** the extent to which taitamariki feel confident in their ability to do paid work.
- **Numeracy:** the extent to which taitamariki are able to do mathematics such as adding, subtracting, counting, multiplying, and conversions.
- **Cultural connection:** the extent to which taitamariki feel connected to their culture, including through language, history and practices.

Responses to these indicators are combined to form a total score that represents ability to achieve sustained employment. The questionnaire was designed to be completed at enrolment and every 3 months thereafter. While 87 percent of HPT participants (n=4026) completed the questionnaire at enrolment, only 30 percent completed the questionnaire 3 months after. This percentage continues to decrease over time, with only 45 participants completing the questionnaire 12 months after enrolment. This suggests that while the questionnaire was useful in terms of assessing the needs of taitamariki at enrolment, it was less commonly used as a means of tracking progress over time.

Figure 17: Number of completed youth employment pathway questionnaires (y-axis) by month after enrolment (x-axis)

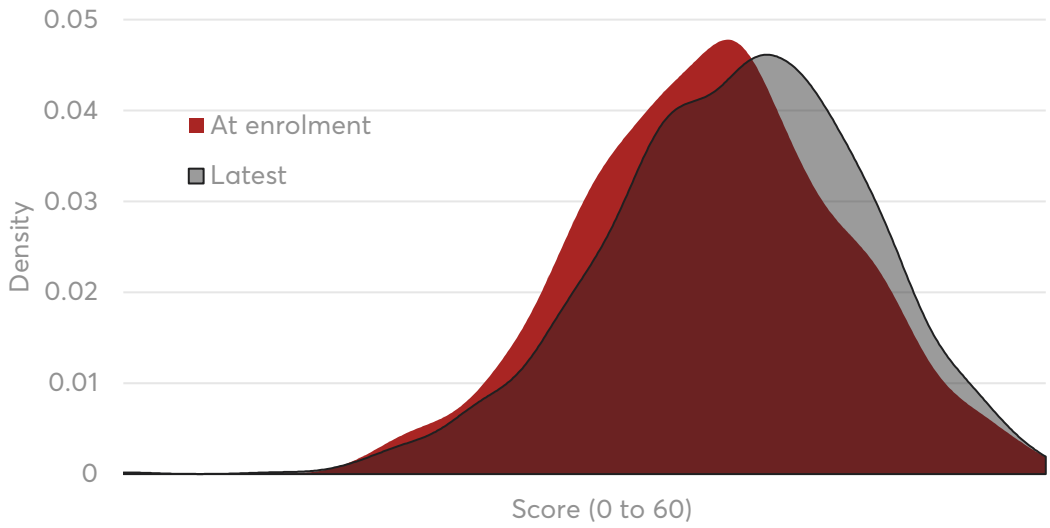


To maximise the available data, pre and post scores were derived for participants who completed the questionnaire at enrolment and at any time after enrolment. When participants had multiple post scores, the latest was used. Based on this, there is matched pre and post data on 1,174 HPT participants.

He Poutama Taitamariki participants showed a 3 percent improvement in their scores measuring ability to sustain employment.

The total score representing ability to sustain employment ranges from 0 to 60.[46] The average total score at enrolment is 38.2 and the average total score from the latest assessment is 39.8. Figure 18 shows the distribution of the total scores and demonstrates the shift towards higher scores after enrolment with HPT.

Figure 18: Density (y-axis) of HPT participant total scores (x-axis) at and after enrolment (n=1174, representing those who have completed the questionnaire more than once)



[46] See Appendix B for details on how the total score was calculated.

Statistical analysis using t-tests[47] shows that the difference between these scores is statistically significant, demonstrating that participants made progress in their ability to sustain employment after enrolment. These results, along with scores broken down by key subgroups, are presented in Table 7.

Table 7: Average change in total score after enrolment by key subgroup

Participant group	Mean pre score	Mean post score	Mean change	95% CI
Total (n=1174)	38.2	39.8	1.8**	(1.3, 2.3)
15 to 17 years old (n=139)	33.7	38.7	5.1**	(3.8, 6.3)
18 to 24 years old (n=1035)	38.8	39.9	1.3**	(0.8, 1.8)
Female (n=528)	38.7	40.1	1.7**	(0.9, 2.4)
Male (n=646)	37.8	39.6	1.9**	(1.3, 2.5)
Māori (n=910)	38.3	40.0	1.9**	(1.3, 2.4)
Pacific (n=77)	40.0	41.2	1.5	(-0.3, 1.1)

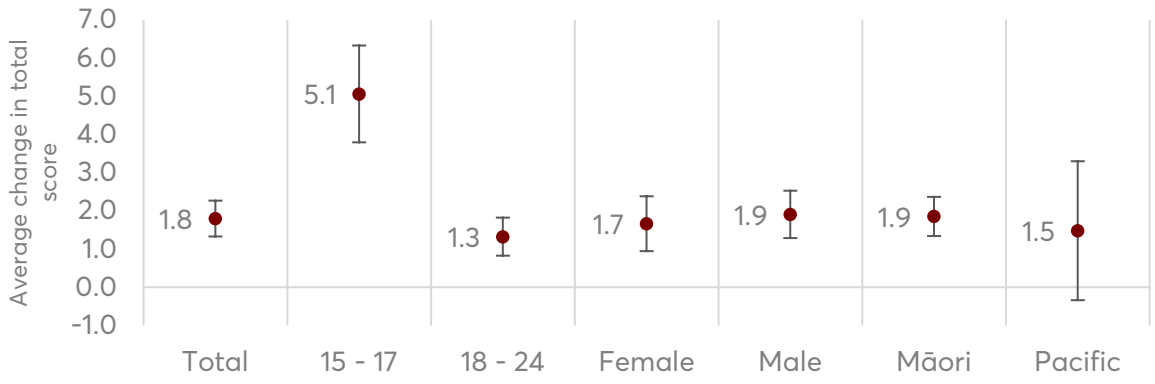
Note: ** = statistically significant results

As shown in Table 7, 15- to 17-year-olds made the most progress towards sustained employment, with an average change in total score of 5.1. For 18- to 24-year-olds, progress was made to a lesser extent with an average change in total score of 1.2. Statistical analysis using t-tests[47] shows that these differences are both statistically significant. Male, female and Māori participants also made statistically significant improvements in their ability to sustain employment after enrolment.

There is no significant improvement for Pacific rangatahi, as the 95 percent confidence interval includes an average change of 0. In other words, we cannot rule out the possibility that there was no change in the total score for Pacific participants. However, it is important to note that only 77 Pacific participants were included in this analysis.

The average change in total scores and the associated confidence intervals are also displayed in Figure 19 below.

Figure 19: Average change in total score (red dots) for HPT participants by key ethnic, age and gender subgroups, with 95% confidence intervals in dashed lines



[47] See Appendix C.

The finding that younger HPT participants made the most progress towards sustained employment aligns with the finding that the odds of achieving an EET outcome was higher for younger HPT participants. It may also be expected given the younger cohort enter HPT with lower ability to sustain employment, as shown in Table 7 above.

He Poutama Taitamariki participants made progress in a variety of areas contributing to overall ability to sustain employment.

Analysing changes in responses to the 20 indicators that make up the total score provides insight into specific areas of progression made by taitamariki on their pathway towards positive life outcomes. Since the indicators were measured at different scales, min-max rescaling was applied. This means that across all indicators, the minimum response score was 0 and the maximum response score was 1, ensuring that the size of the change is standardised across indicators. Statistical t-tests were then applied to test whether the average change in standardised score was statistically significant at the alpha=0.05 level.

Table 8: Average change in individual score after enrolment, all participants (n=1174)

Indicator	Mean pre score	Mean post score	Mean pre score (std)	Mean post score (std)	Mean change (std)	95% CI
Attitude	3.03	3.11	0.76	0.78	0.02**	(0.01. 0.03)
Learning new skills	1.36	1.37	0.68	0.69	0.01	(-0.01, 0.02)
Literacy	2.24	2.47	0.56	0.62	0.06**	(0.04, 0.07)
Training	1.55	1.81	0.39	0.45	0.07**	(0.05, 0.08)
Work experience	1.59	1.76	0.53	0.59	0.06**	(0.04, 0.07)
Working with others	2.80	2.94	0.70	0.73	0.04**	(0.02, 0.05)
Personal management	1.91	1.98	0.64	0.66	0.02**	(0.01, 0.04)
Challenging situations	1.56	1.72	0.52	0.57	0.05**	(0.04, 0.07)
Economic obstacles	2.78	2.82	0.70	0.70	0.01	(-0.01, 0.02)
Job opportunities	1.88	2.03	0.63	0.68	0.05**	(0.03, 0.07)
Housing	0.92	0.95	0.92	0.95	0.03**	(0.01, 0.05)
Influential people	2.99	3.00	0.75	0.75	0.00	(-0.01, 0.02)
Physical health	1.64	1.65	0.82	0.82	0.00	(-0.01, 0.02)
Broader health	1.60	1.60	0.80	0.80	0.00	(-0.02, 0.02)
Drugs and alcohol	2.06	2.02	0.69	0.67	-0.01	(-0.03, 0.00)
Sense of belonging	1.79	1.82	0.60	0.61	0.01	(-0.01, 0.03)
Caretaking	1.42	1.46	0.71	0.73	0.02	(0.00, 0.05)
Confidence	1.60	1.78	0.53	0.59	0.06**	(0.04, 0.08)
Numeracy	0.93	0.99	0.46	0.50	0.03**	(0.02, 0.05)
Cultural connection	2.34	2.51	0.58	0.63	0.04**	(0.03, 0.06)

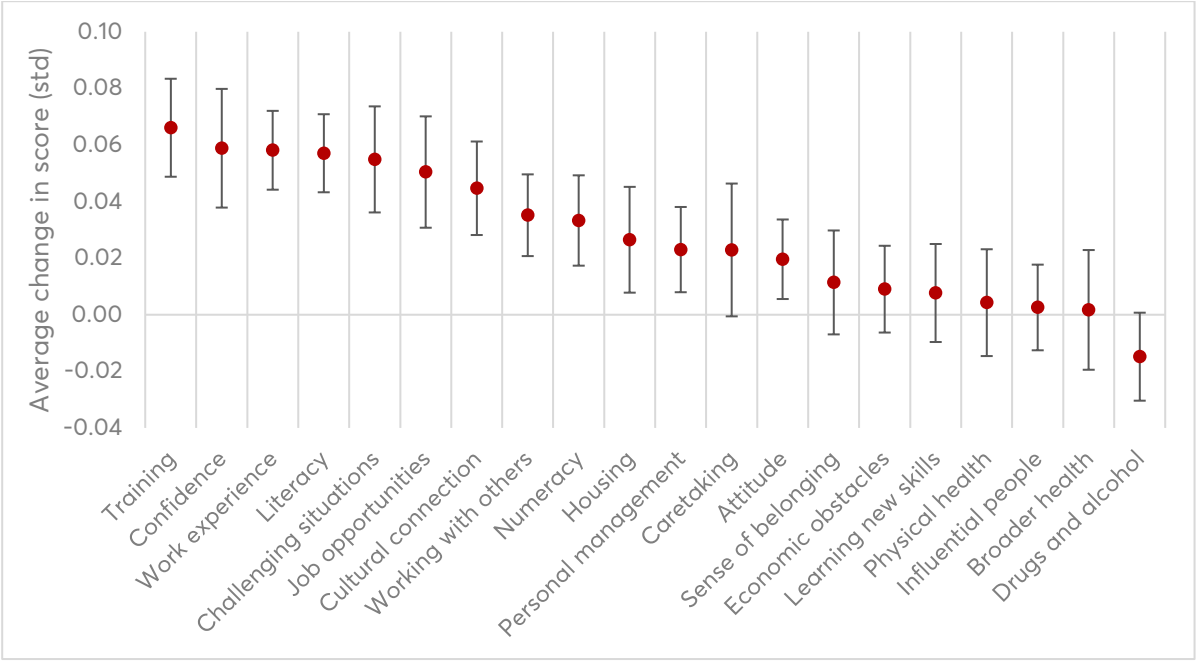
Note: ** = statistically significant results

Table 8 above shows the average scores for each indicator at enrolment and after enrolment (both unstandardised and standardised) and the associated 95% confidence intervals on the average change in standardised score. On average, taitamariki improved in attitude, literacy, training, work experience, working with others, personal

management, challenging situations, job opportunities, housing, confidence, numeracy and cultural connection after enrolment, as these were statistically significant.[48] However, changes in caretaking, economic obstacles, sense of belonging, learning new skills, influential people, physical health, broader health, and drugs and alcohol were not significant. While the average change in score for drug and alcohol decreased (indicating increased drug and alcohol consumption), this was not statistically significant.

These standardised changes and the associated confidence intervals are also displayed in Figure 20 below, ordered by the size of the standardised change.

Figure 20: Average (standardised) change in response to individual indicators (red dots), with 95% confidence intervals in dashed lines



Further, changes in responses to the indicators have been broken down by key subgroups to understand whether the improvements were experienced by participants equitably. Table 9 below shows the average standardised change in responses to individual indicators after enrolment by key subgroups.

[48] Paired t-tests were used to assess differences in scores, see Appendix C Tables A11-A17.

Table 9: Average (standardised) change in individual item for HPT participants by age, sex and ethnicity

	15–17	18–24	Female	Male	Māori	Pacific
Sample size (n)	139	1035	528	646	910	77
Attitude	0.12	0.01	0.01	0.03	0.02	0.01
Learning new skills	0.09	0.00	0.00	0.01	0.01	0.01
Literacy	0.11	0.05	0.04	0.07	0.06	0.01
Training	0.14	0.06	0.06	0.07	0.06	0.05
Work experience	0.12	0.05	0.07	0.05	0.06	0.09
Working with others	0.12	0.02	0.03	0.04	0.03	0.00
Personal management	0.12	0.01	0.03	0.02	0.02	0.00
Challenging situations	0.16	0.04	0.05	0.06	0.06	0.10
Economic obstacles	0.05	0.00	0.00	0.02	0.01	0.05
Job opportunities	0.11	0.04	0.04	0.06	0.05	0.03
Housing	0.05	0.02	0.04	0.02	0.02	0.01
Influential people	0.00	0.00	0.00	0.00	0.00	0.00
Physical health	0.05	0.00	-0.01	0.02	0.01	0.01
Broader health	0.08	-0.01	0.00	0.00	0.01	-0.03
Drugs and alcohol	-0.02	-0.01	0.01	-0.04	-0.01	-0.01
Sense of belonging	0.06	0.00	0.01	0.01	0.01	0.02
Caretaking	0.01	0.03	0.02	0.03	0.02	-0.05
Confidence	0.12	0.05	0.04	0.07	0.06	0.04
Numeracy	0.08	0.03	0.03	0.03	0.04	0.05
Cultural connection	0.10	0.04	0.03	0.06	0.04	0.04

Note: White cells show statistically significant change. Grey cells show non-statistically significant change.

Across all subgroups, work experience and challenging situation scores improved significantly, suggesting the programme, in part, may have contributed to the improvement of these factors as steps along the pathway towards positive life outcomes for all participating taitamariki. Significant improvements in training, reading, cultural connection, confidence, job opportunities and working with others scores were experienced equitably across all subgroups with the exception of Pacific taitamariki. The younger cohort were the only subgroup to make significant progression in economic obstacles, learning new skills, their broader health (including mental health) and a sense of belonging.

CONCLUSIONS

What we can conclude

Success for the programmes was defined as being **effective** insofar as rangatahi achieving sustained employment and positive life outcomes. This includes HPR and HPT enrolling those facing challenges in gaining sustained employment, and helping them make progress towards employment, education and/or training, and (as relevant to the rangatahi) improvements in mental and physical wellbeing, social connectedness and sustained employment. It is also expected that there would be a reduction in benefit receipt and interaction with corrections.[49]

Overall, **HPR and HPT were effective** in terms of enrolling rangatahi the programmes were designed to support. The programmes contributed to benefits for participants over and above similar non-participants in terms of benefit receipt and employment, education and training outcomes, at least for those enrolled between 2018 and 2019.

However, the effects on employment diminished over time, meaning that the **HPR and HPT pilots (2018-2019) were ineffective** at contributing to a sustained impact on employment outcomes and sustained employment, at least with the earliest cohorts of rangatahi. These results may suggest that the pilot programmes have significant impact while the rangatahi are being supported, but limited impact after the support has stopped.

The outcomes assessed 12 and 24 months after enrolment coincide with the COVID-19 pandemic, with rangatahi facing financial instability and existing inequalities for Māori and Pacific rangatahi likely exacerbated during this time.[50] There was a sharp rise in the youth unemployment rate in Aotearoa New Zealand in 2020, with 13.2 percent of 15- to 24-year-olds unemployed in the September 2020 quarter compared to 9.5 percent in the September 2018 quarter. However, these rates returned to pre-COVID-19 levels of 9.6 percent in the September 2021 quarter.[51] This may be due the Government's response to COVID-19, such as the wage subsidy scheme supporting businesses to retain their workforce and a tight labour market with increased demand for workers.[52]

Nonetheless, we expected that these COVID-19 effects would be experienced similarly for participants and non-participants, particularly as the matching technique ensured these groups had similar demographic profiles and similar patterns of engagement with EET before enrolment. This meant we assumed the technique could detect any programme effects on participant outcomes, albeit within the COVID-19 context.

As mentioned, the estimated impacts are reflective of the programmes during their pilot years. Any changes made to the delivery of the programmes are therefore not reflected in these results. This was due to data availability limitations, as HPR participants enrolled after 2019 have not been linked to the IDI. HPT participants enrolled after 2019 have been linked, however there was no way to distinguish these participants from those who

[49] See Appendix E table A32 for the success criteria used.
[50] Webb S, Kingstone S, Richardson E, Flett J. Rapid Evidence Brief: COVID-19 Youth Recovery Plan 2020-2022. 2020. Wellington: Te Hiringa Hauora/Health Promotion Agency
[51] Stats NZ. (2021). *Youth unemployment rate three times the national average.* https://www.stats.govt.nz/news/youth-unemployment-rate-three-times-national-average
[52] Ministry of Social Development. *What happened to people who left the benefit system in the year to June 2021,.* https://www.msd.govt.nz/documents/about-msd-and-our-work/publications-resources/research/benefit-system/what-happened-to-people-who-left-the-benefit-system-during-the-year-ended-30-june-2021-insights-report..pdf

did not participate.[53] HPR and HPT have both implemented adaptations to their delivery since the pilot years, specifically extending the length of time support is given to rangatahi. It is possible that the subsequent cohorts enrolling into these programmes lifted achievement more broadly.

This evaluation assessed the impacts of HPR and HPT up to 24 months after enrolment on the outcomes of participants who enrolled between 2018 and 2019 (representing 7 percent of HPR and 21 of HPT participants in total). While this two-year follow up period provides insight into the longer-term effectiveness of the programmes, some outcomes (such as sustaining employment) may be expected to require a longer period of time to be observed. This could be due to the ongoing impact of COVID-19, but it also may be expected as establishing desired employment and career goals takes time, especially whilst these rangatahi experiment with different EET opportunities.

A consideration for MSD going forward is to resolve the data availability limitations in the IDI to enable further evaluations of programme effectiveness, including for more recent cohorts on outcomes observed two years after enrolment and beyond.

A summary of the success of the programmes is provided below.

The programmes exceeded expectations in enrolling participants that the programmes were designed to support and benefit.

HPR and HPT are both programmes targeted towards 15- to 24-year-olds who are NEET and face challenges in gaining sustained employment. We found that 90 percent of HPR participants and 99 percent of HPT participants were within the target age group and were either NEET at enrolment or had at least one indicator of long-term unemployment. These results show that both programmes are enrolling high proportions of rangatahi that the programmes were originally designed to support and benefit.

The pilot programmes achieved increased engagement in employment, education and/or training expectations.

The pilot programmes (2018-2019) were successful in contributing to higher rates of engagement with employment, education and/or training. These net gains are over and above what other rangatahi not supported by the programmes achieved up to 12 months after enrolment for HPR, and up to 24 months after enrolment for HPT.

More specifically, the proportion of HPR participants engaged in EET was 6.0 (± 3.6) percentage points higher 12 months after enrolment than similar non-participating rangatahi. The proportion of HPT participants engaged in EET was 8.4 (± 4.9) and 6.0 (± 4.5) higher 12 and 24 months after enrolment respectively.

The pilot programmes did not achieve sustained higher rates of employment or sustained employment.

The pilot programmes (2018-2019) contributed to higher rates of engagement with employment up to 12 months after enrolment. However, this was not sustained

[53] See Appendix A for more details.

thereafter. Engagement with employment was not statistically significant for both programmes 19 to 24 months after enrolment.

Additionally, there was no statistically significant difference in the proportion of HPR and HPT participants who sustained employment compared to similar non-participating rangatahi 24 months after enrolment. This result indicates that the programmes did not contribute to improved sustained employment for rangatahi who enrolled between 2018 and 2019.

As mentioned, these estimated impacts on sustained employment are reflective of the programmes during their pilot years and do not account for the subsequent changes to delivery implemented (such as longer contracts and extending the length of time support is provided). These impacts also coincide with COVID-19, which may have caused disruptions for these participants and their employment opportunities.

The pilot programmes reduced benefit receipt up to 12 months after enrolment.

The proportion of HPR participants on a main benefit was 8.2 (± 5.3) percentage points lower 12 months after enrolment compared to similar non-participating rangatahi. For HPT, the proportion of participants on a main benefit was on 5.3 (± 5.1) percentage points lower.

These statistically significant net reductions demonstrate that the pilot programmes (2018-2019) were successful in contributing to lower rates of benefit receipt up to 12 months after enrolment. However, this was not sustained over the 24 months after enrolment.

There were very few pilot programme participants with interactions with corrections.

The proportion of HPR and HPT participants in prison, remand, on home detention or sentenced with community work was not significantly different when compared to similar non-participating rangatahi over 6, 12 or 24 months following enrolment. Although this suggests that reduced interactions with corrections was not achieved by the pilot programmes (2018-2019), this is not surprising as the proportion of participating rangatahi with these interactions were low (less than 7.5 percent).

There was insufficient quantitative evidence about social connectedness and wellbeing impacts for HPR rangatahi.

HPR programme data showed almost all providers were offering pastoral care services to participating rangatahi, and about half offered activities related to wellbeing, such as individual counselling, drug and alcohol support, and gym memberships. Further, of those who completed or withdrew from the programme, 28 percent and 30 percent completed wellbeing related activities and pastoral care, respectively. However, there is insufficient quantitative evidence on the effectiveness of HPR in contributing to improved wellbeing and social connectedness for rangatahi. We anticipate the qualitative findings to evaluate success on this outcome dimension.

HPT participants had improved social connectedness in terms of cultural connection, confidence and comfortability working with others.

HPT used a youth employment pathway questionnaire to assess participant progress. The questionnaire included (but was not limited to) assessments of physical and broader health, sense of belonging, working with others, confidence and cultural connection. While these were not designed to directly measure improvements in social connectedness and wellbeing outcomes, and there was no counterfactual to attribute change directly to the programme, the assessments provide some supporting evidence about improvements in these outcome dimensions.

Responses to the questionnaire demonstrated that taitamariki felt more connected to their culture, more comfortable working with others, and experienced improved confidence in their abilities after enrolling with HPT. These results demonstrate improvements in these specific indicators, which may be expected to improve overall social connectedness and wellbeing. We anticipate the qualitative findings to provide a broader view of the success of HPT in achieving improved social connectedness and wellbeing for taitamariki.

TECHNICAL APPENDIX

Appendix A – Propensity Score Matching in the Integrated Data Infrastructure

Integrated Data Infrastructure

Stats NZ's Integrated Data Infrastructure (IDI) is a linked longitudinal database that combines administrative and survey data from various government and non-government agencies. The IDI allows safe access to de-identified individual-level information, and captures data based mainly on a person's interactions with government agency services. Data in the IDI is 'refreshed' three times a year. Each refresh, existing datasets are updated and relinked. Any new datasets are also added and linked.

Access to the IDI enabled a counterfactual design to be implemented – namely the formation of our groups of interest – two treatment groups comprising HPR participants (HPR treatment) and HPT participants (HPT treatment) and two comparison groups comprising similar rangatahi who had not participated in the programmes (one comparison for HPR and one for HPT). The IDI enables access to life event history (education, justice, employment history) and outcomes (employment, benefit receipt, enrolment in education or training) for these groups.

He Poutama Rangatahi and He Poutama Taitamariki participants linked in the Integrated Data Infrastructure

Participants who enrolled in HPR and HPT between 2018 and 2019 have been linked to the IDI through a non-standard process. These participants consented to their data being linked for statistical and research purposes upon completion of their enrolment details. Very few did not consent, and they were not linked.

Standard of Proof worked with Stats NZ to facilitate consenting participants to be relinked to the October 2022 refresh so that the counterfactual design could be implemented as part of this quantitative evaluation. HPR and HPT participants are not linked as part of the standard refresh process and so eventually this linked data will not be available for use.

Further, HPT participants are also linked to the IDI separately, through the regular MSD supply. This data is therefore updated and relinked as part of the refresh cycle, enabling flexibility should MSD wish to re-evalute HPT at a later date. HPT participants are identified through the employment assistance table, which lists MSD clients and the employment assistance programme(s) they have participated in and when this occurred. This data is sourced from MSD's internal database where 'programme tags' identify the programme that individuals have participated in.

However, there are approximately 10,000 HPT participants in this dataset, with start dates ranging from 2018 to 2022. Upon investigation and discussion with MSD, it was identified that approximatelty half of these individuals have been incorrectly assigned a HPT programme tag in MSD's internal database. While this dataset provides complete coverage of HPT participants, we did not use this to estimate impacts of the programme

due to non-participants being included. There was no way to distinguish between the real participants and those not participating in the IDI. Instead, we used HPT participants enrolled between 2018 and 2019 identified by the dataset described above.

Propensity score matching

A counterfactual design was used to estimate the effectiveness of HPR and HPT on participant outcomes. The counterfactual design asks the question: what outcomes would HPR and HPT participants have achieved if they had not participated in the programmes? This was answered by comparing the participant outcomes to that of a comparison group of non-participants who are similar to the participants when they started the programme. Therefore, any later differences in outcomes between the two groups is interpreted as the causal impact of the programme on participant outcomes.

To create the initial non-participating population(s), we imposed some conditions to create groups that were similar to participating rangatahi based on some basic demographics.

HPR and HPT participants who enrolled between 2018 and 2019 are generally between 15 and 27 years of age and live in one of the four pilot regions: Tai Tokerau, Bay of Plenty, Tairāwhiti and Hawke's Bay. Approximately 55% of HPR and 85% of HPT participants received a benefit in the month they enrolled into the programme.

To account for these factors, we formed the initial HPR non-participating population as:

- 15- to 27-year-olds who lived in either one of the four pilot regions
- Who either received a benefit between 2018 and 2019 or were New Zealand residents who did not receive a benefit between 2018 and 2019.

We formed the initial HPT non-participating population using similar conditions:

- 15- to 27-year-olds who lived in Tai Tokerau (as HPT operates in this region only)
- Who either received a benefit between 2018 and 2019 or were New Zealand residents who did not receive a benefit between 2018 and 2019.

We then applied propensity score matching to identify the matched comparison groups of similar rangatahi who had not participated in the programmes with a range of participant-level variables. The choice of variables used in the matching was tested iteratively. First, all variables that likely predict participation in the programmes and/or influenced the outcomes of interest were derived (listed in Table 9 and 10). We began by including basic demographics and variables related to the key outcomes of interest (such as previous engagement in EET, benefit receipt and interactions with corrections) as matching variables.

Then, we tested the quality of the resulting match. The key assumption was that after matching, there were no significant differences between the participants and their matched comparison non-participating rangatahi in terms of their likelihood of being treated (based on the variables listed in Table 9 and 10). We tested this assumption by comparing the mean observed characteristics and the standardised mean differences for the groups before and after matching. We iteratively added additional matching

variables based on those that were not balanced from the results of the previous matching process and stopped once we were satisfied the two groups were balanced. We regarded the two groups as balanced if there were no significant differences in the covariate means between the treated and comparison groups ($p<0.05$) and standardised mean differences were less than 10 percent. We also visually inspected the distribution of the covariates by propensity score to ensure that the groups were balanced. This process ensured that the treatment and comparison groups were as balanced as possible, and therefore subsequent differences in outcomes observed were more likely to be due to participation in the programmes. The final matching variables used to achieve balance are listed in Table 9 and 10 in the "used in matching" column.

Our preferred method was nearest neighbour matching with replacement. We used up to five nearest neighbours and a calliper of 0.3 of the standard deviation in the propensity scores. The choice of calliper involved a trade-off between statistical precision and a high-quality match. If the calliper was too large, then we would have included rangatahi that were not well matched to HPR and HPT participants. On the other hand, if the calliper was too small, we would have well-matched rangatahi but only a small number. In that case, estimates will have low levels of statistical precision and a higher proportion of the participants would not have been included in the analysis.

The final step was to use the weights obtained in the matching process to estimate the impact of the programme on participant outcomes. Outcomes were calculated by averaging (weighted) outcome measures across HPR and HPT participants and non-participating rangatahi in the matched comparison groups up to 24 months after enrolment. Individuals that did not appear in the administrative datasets were considered as not interacting with the associated outcome.

For engagement with EET, benefit receipt and interactions with corrections, we estimated the collective impact from enrolment to 6, 12 and 24 months afterwards (i.e. 0 to 6 months, 0 to 12 months and 0 to 24 months). For sustained employment, we estimated the impact across 6-monthly periods after enrolment (0 to 6 months, 7 to 12 months, 13 to 18 months and 19 to 24 months). We used 19-to-24-month impact estimates to assess medium-term employment outcomes, i.e. sustained employment. Standard errors and confidence intervals were estimated by bootstrapping (N=100) in order to account for the uncertainty associated with the first stage of the matching process (estimating the likelihood of being treated).[54] We used the R package Matchit[55] for this analysis.

Matching results

The following tables present mean proportions or means averaged for the treatment (HPR and HPT participants) and comparison groups (non-participants). Table A1 refers to HPR participants and Table A2 refers to HPT participants. The tables demonstrate that participants differed from non-participants and that matching brought the groups closer together, at least for the observed variables shown in the tables.

[54] We also compared the bootstrapped errors to robust standard errors that account for the fact that comparison rangatahi might be used more than once in the matched dataset. The bootstrapped errors were similar or slightly larger than the robust standard errors.

[55] Ho DE, Imai K, King G, Stuart EA (2011). "MatchIt: Nonparametric Preprocessing for Parametric Casual Inference." *Journal of Statistical Software,* **42(8)**, 1-28. https://www.jstatsoft.org/article/v42/i08/.

All the key variables for the impact assessment were statistically equivalent for the treatment group and the matched comparison group. The majority of HPR (91 percent) and HPT (93 percent) participants were matched. This means that any impact estimate can be considered representative of total participants. We also visually checked the outcomes of interest by month after enrolment and compared matched participants with all participants to ensure these were representative.

Table A1: HPR matching results

Rangatahi-level variables	After matching		Before matching		Used in matching
	Matched comparison group	HPR participants	Non-participants	HPR participants	
Number of rangatahi	2052	510	43926	561	
Demographics (sourced from Administrative Population Census tables for comparison group and programme source data for treatment group)					
Age Under 18 18 – 21 22 – 25 Over 25	 46% 38% 16% 0%	 45% 39% 15% 2%	 25% 49% 26% 0%	 42% 40% 17% 2%	Yes
Region Northland Auckland[56] Bay of Plenty Gisborne Hawkes Bay	 4% 0% 45% 16% 34%	 4% 3% 44% 15% 34%	 14% 0% 44% 10% 33%	 5% 3% 43% 16% 34%	Yes
Sex Proportion of Males Proportion of Females	 53% 47%	 54% 46%	 49% 51%	 56% 44%	Yes
Ethnicity Māori Pacific European Asian MELAA	 84% 13% 37% 4% 1%	 83% 13% 37% 3% 1%	 51% 7% 63% 6% 1%	 84% 13% 36% 3% 1%	Yes
Benefit history prior to enrolment (sourced from Ministry of Social Development benefits data)					
Proportion on benefit	38%	38%	34%	43%	Yes
Days on benefit	227	214	241	275	No
Days on benefit in the year prior	42	42	28	43	Yes
Proportion on Sole Parent	4%	3%	6%	4%	Yes
Proportion on Job Seeker Health Condition and Disability	10%	9%	14%	10%	Yes
Proportion on Job Seeker Work Ready	30%	29%	26%	34%	Yes
Proportion on Supported Living Payment	2%	2%	2%	3%	Yes
Proportion on Youth Payment	12%	13%	9%	14%	Yes
Child Youth and Family history prior to enrolment (sourced from Oranga Tamariki Child Youth and Family data)					
Number of care and protection events 0 1-2 3-5 6+	 43% 19% 12% 26%	 42% 20% 12% 26%	 63% 13% 8% 13%	 41% 20% 12% 26%	Yes
Number of youth justice events 0 1-2 3-5	 90% 2% 4% 4%	 88% 2% 3% 5%	 90% 2% 2% 3%	 87% 3% 4% 5%	Yes

[56] The region HPR participants lived in at enrolment was included in the HPR dataset supplied to the IDI. We considered participants recorded as living in Auckland to be data entry errors, as the programme did not operate in Auckland during 2018-2019. When selecting the initial non-comparison group, we did not include individuals living in Auckland, so this percentage is zero before and after matching.

Rangatahi-level variables	After matching		Before matching		Used in matching
	Matched comparison group	HPR participants	Non-participants	HPR participants	
6+					
Corrections history prior to enrolment (sourced from Corrections sentencing and remand data)					
Number of months in custody	0.1	0.1	0.3	0.2	Yes
Number of months on home detention	0.0	0.1	0.1	0.1	No
Number of months on post release	0.1	0.1	0.2	0.2	No
Number of months on community service	0.8	0.9	0.9	1.1	Yes
Proportion in custody	2%	3%	3%	3%	No
Proportion in home detention	1%	1%	1%	1%	No
Proportion on post release	1%	1%	2%	2%	No
Proportion on community service	6%	7%	7%	8%	Yes
Employment/earnings history prior to enrolment (sourced from Inland Revenue tax and income data)					
Proportion earning wages or salary	72%	73%	79%	75%	Yes
Number of months earning wages or salary	11.2	11.0	19.6	11.8	Yes
Proportion earning paid parental leave or self-employment income	5%	4%	8%	4%	No
Average wage and salary earnings	$797	$789	$1029	$825	Yes
Proportion earning wages or salary in the year prior	60%	60%	68%	62%	No
Number of months earning wages or salary in the year prior	3	3	5	3	Yes
Proportion earning paid parental leave or self-employment income in the year prior	2%	2%	4%	2%	No
Average wage and salary earnings in the year prior	$749	$731	$1148	$753	Yes
Social housing history prior to enrolment (sourced from Housing New Zealand social housing data)					
Proportion of Housing NZ tenants	42%	40%	21%	43%	Yes
Proportion of Housing NZ tenants in the year prior	6%	5%	4%	6%	No
Proportion applied for Housing NZ tenancy	39%	40%	20%	41%	No
Proportion with emergency housing related grant	2%	2%	1%	2%	No
Education history prior to enrolment (sourced from Ministry of Education data)					
Highest qualification No qualification Level 1-3 Level 4-6 Level 7+	 16% 62% 11% 1%	 15% 64% 11% 1%	 9% 69% 12% 4%	 14% 64% 12% 1%	Yes
Proportion suspended or stood-down from school	35%	36%	20%	37%	Yes
Proportion with non-enrolment or truancy service interactions	33%	32%	22%	32%	Yes

Rangatahi-level variables	After matching		Before matching		Used in matching
	Matched comparison group	HPR participants	Non-participants	HPR participants	
Proportion received special education or learning support initiatives	4%	4%	2%	4%	No
Proportion with behaviour or early intervention service interactions	1%	3%	1%	3%	No
Days spent suspended or stood-down from school	6	6	4	7	No
Days spent in non-enrolment and truancy services	0.4	0.4	0.3	0.4	No
Days spent in special education or learning support initiatives	39	31	24	29	No
Proportion with health-needs related support at school	8%	6%	4%	5%	No
Proportion enrolled in tertiary education or industry training	67%	68%	67%	69%	Yes
Number of months enrolled in tertiary education or industry training in prior 5 years	7	7	9	8	Yes
Offending and victimisation history prior to enrolment (sourced from New Zealand Police recorded crime: offenders and victims data)					
Number of offences	2	2	1	2.	Yes
Number of serious harm offences	0.3	0.3	0.2	0.3	No
Number of serious harm offences in the prior year	0.0	0.1	0.0	0.1	No
Number of offences in the prior year	0.3	0.4	0.2	0.4	No
Number of victimisations	0.4	0.4	0.2	0.5	Yes
Number of serious harm victimisations	0.3	0.3	0.1	0.4	No
Number of serious harm victimisations in the prior year	0.1	0.1	0.0	0.1	Yes
Number of victimisations in the prior year	0.1	0.1	0.1	0.1	No
Health event history prior to enrolment (sourced from Ministry of Health data)					
Proportion with avoidable hospital admissions	4%	4%	3%	4%	No
Proportion with avoidable hospital admissions in the prior year	1%	1%	1%	1%	No
Proportion with serious mental health event	43%	44%	31%	45%	Yes
Proportion with PRIMHD mental health service interaction in prior 10 years	43%	44%	31%	44%	Yes

Table A2: HPT matching results

Rangatahi-level variables	After matching		Before matching		Used in matching
	Matched comparison group	HPT participants	Non-participants	HPT participants	
Number of rangatahi	1869	828	891	9698	
Demographics (sourced from Administrative Population Census tables for comparison group and programme source data for treatment group)					
Age Under 18 18 – 21 22 – 25 Over 25	 4% 61% 34% 0%	 4% 62% 35% 0%	 5% 60% 35% 0%	 3% 64% 32% 0%	Yes
Region Northland	100%	100%	100%	100%	No
Sex Proportion of Males Proportion of Females	 52% 48%	 52% 48%	 49% 51%	 54% 46%	Yes
Ethnicity Māori Pacific European Asian MELAA	 80% 9% 44% 3% 0%	 80% 9% 47% 2% 1%	 53% 7% 65% 6% 1%	 81% 9% 46% 2% 1%	Yes
Benefit history prior to enrolment (sourced from Ministry of Social Development benefits data)					
Proportion on benefit	86%	87%	34%	88%	Yes
Days on benefit	446	466	275	450	Yes
Days on benefit in the year prior	80	76	30	75	Yes
Proportion on Sole Parent	6%	7%	7%	7%	Yes
Proportion on Job Seeker Health Condition and Disability	15%	15%	15%	14%	Yes
Proportion on Job Seeker Work Ready	81%	82%	26%	83%	Yes
Proportion on Supported Living Payment	1%	2%	2%	1%	Yes
Proportion on Youth Payment	15%	17%	9%	16%	Yes
Child Youth and Family history prior to enrolment (sourced from Oranga Tamariki Child Youth and Family data)					
Number of care and protection events 0 1-2 3-5 6+	 40% 18% 16% 26%	 41% 19% 14% 26%	 63% 13% 8% 13%	 41% 19% 14% 26%	Yes
Number of youth justice events 0 1-2 3-5 6+	 88% 3% 4% 5%	 87% 4% 4% 5%	 89% 2% 2% 3%	 87% 4% 4% 5%	Yes
Corrections history prior to enrolment (sourced from Corrections sentencing and remand data)					
Number of months in custody	0.5	0.5	0.3	0.5	No
Number of months on home detention	0.2	0.2	0.1	0.2	No
Number of months on post release	0.3	0.4	0.2	0.4	No

Rangatahi-level variables	After matching		Before matching		Used in matching
	Matched comparison group	HPT participants	Non-participants	HPT participants	
Number of months on community service	2	2	1	2	No
Proportion in custody	7%	6%	3%	7%	Yes
Proportion in home detention	3%	3%	2%	3%	No
Proportion on post release	4%	4%	2%	4%	Yes
Proportion on community service	15%	15%	8%	15%	Yes
Employment/earnings history prior to enrolment (sourced from Inland Revenue tax and income data)					
Proportion earning wages or salary	77%	80%	81%	80%	No
Number of months earning wages or salary	14.0	14.4	23.9	14.2	No
Proportion earning paid parental leave or self-employment income	15%	12%	13%	11%	No
Average wage and salary earnings	$1030	$1057	$1331	$1056	No
Proportion earning wages or salary in the year prior	57%	61%	68%	62%	Yes
Number of months earning wages or salary in the year prior	3.16	3.41	5.67	3.46	Yes
Proportion earning paid parental leave or self-employment income in the year prior	8%	6%	7%	6%	No
Wage and salary earnings in the year prior	$861	$921	$1527	$926	Yes
Social housing history prior to enrolment (sourced from Housing New Zealand social housing data)					
Proportion of Housing NZ tenants	41%	41%	21%	41%	No
Proportion of Housing NZ tenants in the year prior	7%	8%	4%	8%	No
Proportion applied for Housing NZ tenancy	39%	40%	20%	41%	Yes
Proportion with emergency housing related grant	1%	2%	1%	2%	No
Education history prior to enrolment (sourced from Ministry of Education data)					
Highest qualification No qualification Level 1-3 Level 4-6 Level 7+	 9% 73% 13% 1%	 9% 74% 12% 2%	 10% 65% 14% 5%	 9% 75% 11% 2%	Yes
Proportion suspended or stood-down from school	42%	42%	23%	42%	No
Proportion with non-enrolment or truancy service interactions	46%	44%	24%	45%	No
Proportion received special education or learning support initiatives	2%	2%	2%	2%	No
Proportion with behaviour or early intervention service interactions	1%	1%	0%	1%	No
Days spent suspended or stood-down from school	9	9	5	9	No

Rangatahi-level variables	After matching		Before matching		Used in matching
	Matched comparison group	HPT participants	Non-participants	HPT participants	
Days spent in non-enrolment and truancy services	0.5	0.5	0.3	0.6	Yes
Days spent in special education or learning support initiatives	10	8	22	8	Yes
Proportion with health-needs related support at school	8%	5%	4%	5%	No
Proportion enrolled in tertiary education or industry training	84%	82%	79%	82%	Yes
Number of months enrolled in tertiary education or industry training in prior 5 years	11	10	11	10	No
Offending and victimisation history prior to enrolment (sourced from New Zealand Police recorded crime: offenders and victims data)					
Number of offences	2	2	1	2	Yes
Number of serious harm offences	0.3	0.3	0.1	0.3	No
Number of serious harm offences in the prior year	0.0	0.0	0.0	0.0	No
Number of offences in the prior year	0.3	0.3	0.2	0.3	Yes
Number of victimisations	0.3	0.3	0.2	0.3	Yes
Number of serious harm victimisations	0.3	0.2	0.1	0.2	No
Number of serious harm victimisations in the prior year	0.1	0.1	0.0	0.1	No
Number of victimisations in the prior year	0.1	0.1	0.1	0.1	Yes
Health event history prior to enrolment (sourced from Ministry of Health data)					
Proportion with avoidable hospital admissions	5%	5%	4%	5%	No
Proportion with avoidable hospital admissions in the prior year	2%	1%	1%	1%	No
Proportion with serious mental health event	52%	49%	30%	49%	Yes
Proportion with PRIMHD mental health service interaction in prior 10 years	51%	48%	30%	48%	Yes

Impact estimates

Table A3 and A4 summarise the impact of the programmes on EET and other related outcomes for participants who enrolled between 2018 and 2019. Five outcomes are presented:

- The proportion of participants who were in employment, education or training (EET)
- The proportion of participants who were in employment
- The proportion of participants in sustained employment
- The proportion of participants aged 18 or over that were on a main benefit
- The proportion of participants who were in prison, remand, on home detention or sentenced with community work.

EET, sustained employment, benefit and corrections outcomes are measured from enrolment up to 24 months afterwards to estimate the collective impact of the programmes. Employment outcomes are measured in 6-monthly periods after enrolment to assess the time-dependent nature of the impacts. For each outcome type and outcome period, the table shows the average value of the outcome for the matched comparison group and the participants. The third column presents the impact estimates (the average treatment effect on the treated). The standard errors and 95 percent confidence intervals are also shown.

Table A3: HPR impact estimates

Periods of time from enrolment	Mean – comparison group (n=510)	Mean - treatment group (n=2052)	Impact estimate	SE	95% confidence intervals	
Proportion of participants in employment, education or training						
0 to 6 months	56.1%	62.5%	6.4%	2.0%	2.5%	10.3%
0 to 12 months	56.3%	62.3%	6.0%	1.8%	2.4%	7.8%
0 to 24 months	54.4%	57.3%	2.9%	1.8%	-0.8%	6.6%
Proportion of participants in employment						
0 to 6 months	30.1%	38.6%	8.4%	2.0%	4.5%	12.4%
7 to 12 months	37.5%	44.7%	7.2%	2.1%	3.1%	11.3%
13 to 18 months	41.9%	43.4%	1.5%	2.7%	-3.8%	6.8%
19 to 24 months	44.5%	47.0%	2.5%	2.7%	-2.8%	7.8%
Proportion of participants in sustained employment						
0 to 24 months	22.6%	21.3%	-1.3%	1.8%	-4.8%	2.2%
Proportion of participants (aged 18+) on a main benefit						
0 to 6 months	50.5%	41.8%	-8.7%**	3.4%	-15.4%	-2.1%
0 to 12 months	47.2%	39.0%	-8.2%**	2.7%	-13.4%	-2.9%
0 to 24 months	43.1%	39.3%	-3.8%	2.4%	-8.6%	1.0%
Proportion of participants in prison, remand or home detention						
0 to 6 months	0.5%	1.2%	0.7%	0.4%	-0.2%	1.5%
0 to 12 months	0.5%	1.2%	0.7%	0.4%	-0.2%	1.6%
0 to 24 months	0.8%	1.4%	0.6%	0.5%	-0.3%	1.5%

Table A4: HPT impact estimates

Periods of time from enrolment	Mean comparison (n=828)	Mean treatment (n=1869)	Impact estimate	SE	95% confidence intervals	
Proportion of participants in employment, education or training						
0 to 6 months	28.3%	36.0%	7.7%**	2.5%	2.9%	12.5%
0 to 12 months	31.1%	39.6%	8.4%**	2.5%	3.6%	13.3%
0 to 24 months	34.0%	39.9%	6.0%**	2.3%	1.5%	10.5%
Proportion of participants in employment						
0 to 6 months	21.9%	29.1%	7.2%**	2.3%	2.8%	11.7%
7 to 12 months	28.5%	37.1%	8.6%**	2.8%	3.1%	14.0%
13 to 18 months	31.2%	35.0%	3.8%	3.0%	-2.2%	9.7%
19 to 24 months	32.4%	35.9%	3.5%	3.1%	-2.6%	-9.6%
Proportion of participants in sustained employment						
0 to 24 months	15.2%	17.2%	2.0%	1.7%	-1.3%	5.3%
Proportion of participants (aged 18+) on a main benefit						
0 to 6 months	75.5%	72.1%	-3.4%	2.4%	-8.1%	1.3%
0 to 12 months	70.4%	65.0%	-5.3%**	2.6%	-10.5%	-0.1%
0 to 24 months	67.1%	62.5%	-4.6%	2.7%	-9.9%	0.8%
Proportion of participants in prison, remand or home detention						
0 to 6 months	1.0%	1.0%	0.0%	0.3%	-1.0%	0.9%
0 to 12 months	1.2%	1.1%	-0.1%	0.41%	-1.0%	0.8%
0 to 24 months	1.5%	1.4%	-0.2%	0.5%	-1.1%	0.8%

Appendix B – Programme data

Overview

HPR and HPT both capture data about participants, their progress and their outcomes for monitoring purposes. There are some key differences in the content and manner in which this data is collected. An overview of the data is provided in Table A5 and discussed in detail in this section.

Table A5: Content of information collected in HPR and HPT programme monitoring data

Collection	Information collected	
	He Poutama Taitamariki	He Poutama Rangatahi
Demographics and indicators of long-term unemployment, collected when participant enrols in programme	Gender, ethnicity, age, highest qualification, stand-down or expulsions from school, NEET status, NEET duration, benefit status, driver licence status, dependents, criminal convictions, and age when last attended school.	
Participant progression, collected throughout the programme	20 self-assessed indicators related to ability to sustain employment. These self-assessments are intended to be taken at enrolment and every 3 months thereafter.	Programme outputs/activities completed and the date of completion. Activity varies depending on provider and participant. Providers are expected to supply this information monthly to the Ministry.
Participant outcomes, collected when achieved	Whether each participant is unenrolled, not engaged in, engaged in or completed the programme. Whether the participant is NEET, in education or training, doing work experience or temporary /seasonal employment or in continuous (full-time) employment. These outcomes are recorded monthly.	The date of enrolment, current status in programme, employment/training outcome, industry of employment/training/, location of employment/training. Providers are expected to supply this information monthly to the Ministry.

Data collected at enrolment

Both HPR and HPT collect information about participants when they enrol in the programme. Participants are given an enrolment form to fill out themselves (self-complete), which asks basic demographic questions such as their age, gender and ethnicity. Additionally, information is collected to understand what barriers to engaging in employment, education and training the participants face. This includes information such as their qualification level, NEET status, benefit status, and whether they have: a driver licence, been stood down or expelled from school, any previous criminal convictions, and caregiving responsibilities. This is consistent across both programmes.

Data collected about progression

HPR and HPT both collect information about participants as they progress through the programme. However, there are key differences between what is captured and how this can be used to measure and understand participant progress.

A youth employment pathway questionnaire was designed by Standard of Proof and MBIE based on community discussions and research evidence.[57] The questionnaire was designed to first, assist HPR providers to understand the strengths of rangatahi and to identify areas requiring further support, and second, to measure and track progress towards sustained employment over time. The questionnaire contains 20 indicators of ability to achieve sustained employment. In 2020, feedback from HPR providers about the burden of administering the questionnaire led the Ministry to develop a new Excel template for providers to capture participant achievements and employment or training outcomes.

HPR providers are now expected to send updated individual-level data to the Ministry monthly. Information collected in the participant engagement form is entered into the Excel template, as well as participant EET outcomes and when these occurred. Rather than collecting information about participant ability and progression from the questionnaire, providers record intermediate steps along their journey (outputs/activities) and when these were completed.

There are generally no standardised output categories that providers are expected to report on, however most report on pastoral care and driver licencing. To assist with analysis, outputs were grouped into key themes in three stages. First, HPR programme staff provided guidance on the key themes. These 11 key themes were suggested in line with the initial development of a new and simplified monitoring framework. Second, the unique outputs were matched to the relevant 11 themes via fuzzy matching (fuzzyjoin package in R). Fuzzy matching involved an algorithm that recognises key words or phrases in text that is often messy (e.g. 'CV'). Lastly, outputs that could not be matched using fuzzy matching were matched manually. The final allocations of outputs into themes were approved by HPR programme staff.

HPT continues to administer the youth employment pathway questionnaire, also known as the Sense of Belonging and Pathway for Individual Development, Engagement and Respect for Self, (SPIDER) self-assessment tool. HPT does not collect outputs/activity information. This is a key difference between the data that is collected for the programmes. Details on the youth employment pathway questionnaire is provided in Appendix C.

Data collected about outcomes

The outcomes collected for both programmes include whether the participant is NEET, in education or training, doing work experience or temporary/seasonal employment or in permanent (full time) employment. HPR also collects the industry and location of the employment or education/training outcome. As mentioned, HPR captures outcome data

[57] Standard of Proof (2021). Youth Employment Pathway questionnaire 2.0: psychometric properties of a preliminary scale measuring the ability to obtain and retain employment.

in the Excel template that is provided to the Ministry on a monthly basis. HPT capture outcomes every month after enrolment, along with the participant's engagement in the programme.

He Poutama Rangatahi monthly reports

Before the implementation of monthly reports, HPR providers were not required to send back individual-level information to the Ministry. Additionally, a few currently active providers also do not send back this level of data. Aggregated information about enrolment and outcomes are available for these providers. This means varying degrees of data are available for HPR participants and providers. For consistency, we have used individual-level data from the available monthly reports throughout this evaluation (i.e. individual-level information as shown in Table A6 below).

Table A6: HPR programme data availability by providers and participants

Information available	Providers	Participants
Individual-level	**61**	**2998**
Summarised	34	4167
Total	95	7165

Further, some HPR providers do not send updated reports every month. We have therefore used the latest available monthly report for 61 providers. This is summarised in Table A7 below.

Table A7: HPR monthly reports used in the evaluation

Monthly report	Number used
November 2022	36
October 2022	11
September 2022	9
August 2022	1
July 2022	1
June 2022	1
December 2021	1
October 2021	1
Total providers	**61**

Appendix C – Youth employment pathway questionnaire

As mentioned in Appendix B, HPT continue to administer the youth employment pathway questionnaire to measure and track participant progress to sustained employment. The questionnaire contains 20 indicators, originally each with 5 response options. In 2021, Standard of Proof revised the questionnaire.[58] All 20 indicators were retained, however response categories for 13 items were collapsed, as this improved the meaningful distinction between the responses.

The questionnaire administered by HPT included the original 5 response options. The questionnaire responses were recoded according to the revised questionnaire. See Table A8 for the original questionnaire and Table A9 for the revised questionnaire below.

Table A8: Original youth employment pathway questionnaire with 5 responses for each item. This questionnaire was administered by HPT to participating rangatahi

Question	1	2	3	4	5
1. My attitude to working	I don't want a job.	I may want a job.	I want a job, but it's not a priority for me.	It's a priority for me to get and keep a job.	It's a top priority for me to get and keep a job.
2. My view about learning new skills	If I'm not good at something, I'm not going to try.	If I'm not good at something, I'm going to avoid trying.	I can learn some new skills, but I sometimes avoid it because it's hard.	I take on some challenges although I know I'll make mistakes.	I take on new learning and challenges and learn from my mistakes.
3. Reading	I struggle to read simple documents and signs. I sometimes guess as to what they mean.	I can read simple documents (e.g., short forms) and signs (e.g. on the street) easily.	I understand ideas in longer text, and can search documents for key information easily, locating information to answer questions.	I can filter complex text for important information, sometimes requiring inferring the meaning, and I'm able to summarise it well.	I can filter and synthesise complex text, integrating new information across several texts to help me understand.
4. Relevant training	I have no relevant training for my desired job.	I've some training, but I haven't completed any relevant training for my desired job.	I've completed some of the relevant training for my desired job.	I've completed most of the necessary training for my desired job.	I've completed all the necessary training for my desired job.
5. My work experience	I have no work experience at all.	I have a few months of work experience, although it's patchy or irregular.	I have a few years of work experience (1-2 years), although it's a bit patchy or irregular.	I have some regular work experience (1-2 years).	I have more than 2-3 years of regular work experience.

[58] Standard of Proof (2021). Youth Employment Pathway questionnaire 2.0: psychometric properties of a preliminary scale measuring the ability to obtain and retain employment.

Question	1	2	3	4	5
6. My feeling about working with others	I prefer not to work with other people or in a team.	I prefer to work only with my friends/family.	I'll work with others, in teams, if necessary.	I'll work with others and can get on with a variety of people.	I prefer working with others and can easily get on with a variety of people.
7. My personal management	I'm always late or absent, and rarely complete tasks.	I'm consistently late or absent, and sometimes do not complete tasks.	I may be late or absent or may not complete tasks.	I'm rarely late or absent, and often complete tasks.	I'm never late or absent, and always complete tasks.
8. Challenges for me	I regularly give up if things aren't going well.	I sometimes give up when things aren't going well.	I try to work things out when things aren't going well.	I find solutions to challenges; I believe setbacks are to be expected.	I welcome challenges and change, and I always find solutions.
9. Economic obstacles	I can't take a job because I'll lose my benefits (WINZ); the costs related to working are too expensive for me (e.g. materials or transport).	I'd have to find specific types of jobs so I don't lose my benefits; the costs related to getting a job may be too expensive.	I'm unsure if work-costs can be maintained over time.	I recognise that there may be economic obstacles to getting a job, but these won't influence me getting a job.	There are no recognised economic obstacles to stop me from getting a job.
10. Job opportunities	I'm homebound or living where no jobs exist.	There are very few jobs available and accessible to me (e.g. transport, location).	There are some jobs available and accessible to me.	There are positions available and accessible that are relevant to me now.	There are positions available that are relevant to me now and in the future.
11. My housing situation	I don't have a safe home or facilities to go to.	I am couch surfing, or tenancy failing; uncertain housing situation.	I have a safe home to go to, but it does not have good facilities/healthy .	There's no known risk around me; I have good shelter or facilities.	I have a very safe and stable housing; very good shelter or facilities.
12. The most influential people around me	They aren't supportive and would try to stop me from gaining work.	They wouldn't try to stop me but would not help me towards employment.	They may ask me about employment and may very occasionally help me.	They would help me to get or keep a job.	They would provide me with consistent and ongoing support to get or keep a job.
13. My physical health	I'm regularly unwell; I'm unfit for any physical activity; or I have an uncontrolled chronic illness (diabetes, asthma etc.).	I'm often unwell; I'm unfit for some physical activities required for work; or I have poorly controlled chronic illness (diabetes, asthma etc.).	I'm sometimes unwell; I may be physically unfit but can do physical activities required for work; or I have a controlled chronic illness.	I'm rarely unwell and I'm physically fit; or I have controlled chronic illness (diabetes, asthma etc.).	I'm always well and physically fit; or I have a controlled or absent chronic illness (diabetes, asthma etc.).
14. My broader health, including mental health and	I have uncontrolled behaviours or mood, with risk of harm to myself and	Frequent uncontrolled behaviours or mood (weekly/monthly); or my mental	I manage my behaviours or mood, or any mental health issue or disability; I	I have a good level of mood, behavioural and conduct; I access and maintain a	I have a regularly stable and good level of mood, behavioural and conduct; I have no symptoms.

Question	1	2	3	4	5
any disabilities	others.	health issue or disability is not well managed.	access any necessary treatment, therapy or medication.	treatment plan.	
15. Alcohol or drug use	I consume alcohol or drugs, and feel intoxicated, daily.	I consume alcohol or drugs situationally but regularly (e.g. multiple times a week), to be alert, calm, or to relieve anxiety or pain.	I consume alcohol or drugs recreationally, consuming weekly, two or three times a week; I have a controlled use in social occasions.	I consume alcohol or drugs experimentally; mostly on weekends or social occasions.	I have not consumed alcohol or drugs in last 6 months; I have extended periods of going without or not consuming at all.
16. My sense of belonging	I don't connect to my community; I feel 'I don't belong here'.	I have a limited or loose sense of belonging to my community; I feel 'it's not really my community'.	I have some connection and belonging to my community.	I have a reasonable sense of belonging to my community.	I have a strong sense of belonging; I feel a pride of place.
17. Caretaking If you have to care for another person, such as siblings, children, grandparents	I don't yet have a plan, or I don't have any support or services to help me with my caretaking responsibilities if I get a job or study.	I have a plan but it's unreliable -- it's likely I'll need to take off every week because of my caretaking responsibilities.	I have a plan, but the support may not always be reliable -- it's likely I will need to take off once every month because of my caretaking responsibilities.	I have a plan and the support is reliable. There may be a few times a year where I need to take off because of my caretaking responsibilities.	I have a plan (and backup plan) for every day when I have other stuff to do, like work of study. I have regular and reliable support.
18. Confidence in my ability and readiness	I'm not confident that I'm currently able and ready for a job.	I'm a little confident in my current ability and readiness for a job.	I'm somewhat confident in my ability and readiness for a job.	I'm mostly confident in my current ability and readiness for a job.	I'm very confident in my current ability and readiness for a job.
19. Numbers	I struggle to add and subtract, and I sometimes guess the result.	I can add and subtract, counting on and back in 1s and 10s in my head.	I can add and subtract two-digit numbers and multiply numbers (7 x 8 = 56).	I can multiply and divide (10/3 = 3.3) and find fractions (1/3 of 24 = 8).	I can add and subtract, convert fractions and percentages (3/12 = 1/4 = 25%).
20. My cultural connection	I don't connect to any culture.	I have a limited cultural connection or understanding of my cultural language, history and practices	I connect with my culture, but I don't feel the need to actively participate with my language, history and practices	I actively connect with my culture through language, history and practices when I can	I have a strong sense of connection to my culture. I live and breathe it in my community.

Table A9: Revised youth employment pathway questionnaire with some response options removed. HPT rangatahi responses were re-coded to match these response scales

Question	1	2	3	4	5
1. My attitude to working	I don't want a job.	I may want a job, but it's not a priority for me.	It's a priority for me to get and keep a job.	It's a top priority for me to get and keep a job.	
2. My view about learning new skills	If I think it's hard, I'm not going to try.	If I think it's hard, I may avoid trying.	I will try to learn new skills although I know I'll make mistakes.	I eagerly take on learning new skills; I learn from my mistakes.	
3. Reading	I struggle to read simple documents and signs. I sometimes guess what they mean.	I can read simple documents (e.g. short forms) and signs (e.g. on the street) easily.	I understand ideas in longer text and can find information to answer questions easily.	I can understand long, and complex text easily; I can pull information together from several complex texts to build a broad understanding.	
4. Relevant training	I have no relevant training for my desired job.	I've completed some of the relevant training for my desired job.	I've completed most of the relevant training for my desired job.	I've completed all the necessary training for my desired job.	
5. My work experience	I have no work experience at all.	I have a few months of work experience.	I have 1 to 2 years of work experience.	I have more than 2 years of regular work experience.	
6. My feeling about working with others	I won't work with other people.	I will work only with my friends or family.	I'll work with others if necessary.	I'll work with others and can get on with a variety of people.	I prefer working with others. I easily get on with a variety of people.
7. My personal management	I'm consistently late or absent, and sometimes do not complete tasks.	I'm sometimes late or absent and may not complete tasks.	I'm rarely late or absent, and often complete tasks.	I'm never late or absent, and always complete tasks.	
8. Challenges for me	I often give up when things aren't going well.	I may give up but I try to work things out when things aren't going well.	I often find solutions to challenges.	I welcome challenges and create solutions.	
9. Economic obstacles	I can't take a job because I'll lose my (WINZ) benefit; or the costs of working are too expensive (e.g. materials, transport).	I'd have to find specific types of jobs so I don't lose my benefit; or the costs of working may be too expensive.	I'm unsure if the costs related to working can be maintained over time.	There may be financial barriers to me getting a job, but these won't influence me.	There are no recognised financial barriers to stop me from getting a job (e.g. loss of benefits, costs of materials, transport).
10. Job opportunities	I can't access any jobs (e.g. transport, location, age).	There are very few jobs accessible to me.	There are some jobs accessible to me.	There are relevant positions accessible and available to me (e.g. transport,	

Question	1	2	3	4	5
				location, my age)	
11. My housing situation	I don't have a safe home; or I have an uncertain housing situation.	I have a safe home.			
12. The most influential people around me	They would try to stop me from getting a job.	They wouldn't try to stop me but would not help me get a job.	They may ask me about getting a job and may occasionally help me.	They would help me to get or keep a job.	They would provide me with consistent, ongoing support to get and keep a job.
13. My physical health	I'm not fit for some physical activities required for work (poor fitness or uncontrolled illness) e.g. diabetes, asthma etc.	I'm may not be fit but I can do most physical activities required for work (moderate fitness or somewhat controlled illness) e.g. diabetes, asthma, etc.	I'm fit for all physical activities required for work (good fitness; controlled or no chronic illness) e.g. diabetes, asthma etc.		
14. My broader health, including mental health and any disabilities	I've frequent uncontrolled moods or behaviours; or my mental health is not well managed.	I mostly manage my moods or behaviours, or any mental health. I access any necessary treatment or medication.	I've regularly stable and good levels of mood or behaviours. I have no mental health issue symptoms.		
15. Alcohol or drug use	I consume alcohol or drugs and feel intoxicated daily.	I consume alcohol or drugs socially, multiple times a week.	I consume alcohol or drugs experimentally, mostly on weekends or social occasions.	I haven't consumed alcohol or drugs in the last six months; or I don't consume at all.	
16. My sense of belonging	I don't connect to my community. I feel like "I don't belong here."	I have a limited sense of belonging. I feel like "It's not really my community."	I have some sense of belonging to my community.	I have a strong sense of belonging. I feel a pride of place.	
17. Caretaking if you have to care for another person, such as siblings, children, grandparents	I don't have any support or services that can help me with my caregiving responsibilities if I get a job,	I have support or services that can help me with my caregiving responsibilities, but they may not be reliable. If I get a job, I may need time off for	I have no caregiving responsibilities, or I have reliable support available when I get a job.		

Question	1	2	3	4	5
		caregiving.			
18. Confidence in my ability and readiness	I have little confidence in my ability to do paid work.	I have some confidence in my ability to do paid work	I'm mostly confident in my ability to do paid work.	I'm fully confident in my ability to do paid work.	
19. Numbers	I struggle to do any mathematics, including adding and subtracting.	I can add and subtract easily or count forward and backward in 1s and 10s.	I can easily add and subtract, counting forward and backward in 1s and 10s; as well as multiply numbers easily (7 x 8 = 56).	I can add, subtract, multiply and divide numbers, find and convert fractions to percentages easily (3/12 = 1/4 = 25%).	
20. My cultural connection	I have a limited or no sense of connection to my culture.	I connect but I don't feel the need to participate with my cultural language, history and practices.	I participate through language, history and practices when I can.	I have a strong sense of connection to my culture. 'I live and breathe my culture'.	

Pre-post analysis was conducted on 1,174 HPT participant responses before and after participation in the programme, which accounts for 29% of the total participants (n=4026). The remaining participants not included in the analysis either answered the questionnaire only once upon enrolment or did not complete the questionnaire at all. The pre data consists of their responses to the youth employment pathway questionnaire at enrolment, and the post data consists of their responses after enrolment (taking the latest available responses if the participant completed the questionnaire multiple times after enrolment).

Paired t-tests were used to test whether there was a significant difference, on average, between these responses. Statistical significance was measured using 95 percent confidence intervals and associated p-values ($p<0.05$). These were performed for total participants as well as key subgroups. The results are shown in Table A10 below.

Table A10: Paired t-test for changes in total score

Group	Average total score at enrolment	Average latest total score	Average change in total score	p-value	95% confidence interval (lower limit)	95% confidence interval (upper limit)
Total	38.2	39.8	1.8	<0.01	1.3	2.3
15 - 17	33.7	38.7	5.1	<0.01	3.8	6.3
18 - 24	38.8	39.9	1.3	<0.01	0.8	1.8
Female	38.7	40.1	1.7	<0.01	0.9	2.4
Male	37.8	39.6	1.9	<0.01	1.3	2.5
Māori	38.3	40.0	1.9	<0.01	1.3	2.4
Pacific	40.0	41.2	1.5	0.11	-0.3	3.3

Paired t-tests were also used to test significant differences on responses to individual indicators in the youth employment pathway questionnaire. Since the indicators were measured at different scales, min-max re-scaling was applied. This means that across all indicators, the minimum response score was 0 and the maximum response score was 1, ensuring that the size of the change is standardised across indicators. Differences in standardised responses were then analysed. Statistical significance was measured using 95 percent confidence intervals and associated p-values ($p<0.05$). The results are shown in the tables below.

Table A11: Paired t-test for change in indicator scores, all participants (n=1174).

Indicator	Enrolment score	Latest score	Enrolment score (std)	Latest score (std)	Change (std)	p-value
Attitude	3.03	3.11	0.76	0.78	0.02	0.01
Learning new skills	1.36	1.37	0.68	0.69	0.01	0.38
Literacy	2.24	2.47	0.56	0.62	0.06	<0.01
Training	1.55	1.81	0.39	0.45	0.07	<0.01
Work experience	1.59	1.76	0.53	0.59	0.06	<0.01
Working with others	2.80	2.94	0.70	0.73	0.04	<0.01
Personal management	1.91	1.98	0.64	0.66	0.02	<0.01
Challenging situations	1.56	1.72	0.52	0.57	0.05	<0.01
Economic obstacles	2.78	2.82	0.70	0.70	0.01	0.25
Job opportunities	1.88	2.03	0.63	0.68	0.05	<0.01
Housing	0.92	0.95	0.92	0.95	0.03	0.01
Influential people	2.99	3.00	0.75	0.75	0.00	0.74
Physical health	1.64	1.65	0.82	0.82	0.00	0.66
Broader health	1.60	1.60	0.80	0.80	0.00	0.87
Drugs and alcohol	2.06	2.02	0.69	0.67	-0.01	0.06
Sense of belonging	1.79	1.82	0.60	0.61	0.01	0.22
Caretaking	1.42	1.46	0.71	0.73	0.02	0.06
Confidence	1.60	1.78	0.53	0.59	0.06	<0.01
Numeracy	0.93	0.99	0.46	0.50	0.03	<0.01
Cultural connection	2.34	2.51	0.58	0.63	0.04	<0.01

Table A12: Paired t-test for change in indicator scores, 15-17-year-olds (n=139)

Indicator	Enrolment score	Latest score	Enrolment score (std)	Latest score (std)	Change (std)	p-value
Attitude	2.73	3.20	0.68	0.80	0.12	<0.01
Learning new skills	1.09	1.27	0.55	0.64	0.09	<0.01
Literacy	1.91	2.34	0.48	0.58	0.11	<0.01
Training	1.01	1.53	0.25	0.38	0.14	<0.01
Work experience	0.96	1.32	0.32	0.44	0.12	<0.01
Working with others	2.43	2.91	0.61	0.73	0.12	<0.01
Personal management	1.49	1.86	0.50	0.62	0.12	<0.01
Challenging situations	1.14	1.63	0.38	0.54	0.16	<0.01
Economic obstacles	2.69	2.88	0.67	0.72	0.05	0.03
Job opportunities	1.74	2.05	0.58	0.68	0.11	<0.01
Housing	0.92	0.97	0.92	0.97	0.05	0.05
Influential people	3.11	3.12	0.78	0.78	0.00	0.94
Physical health	1.56	1.65	0.78	0.83	0.05	0.11
Broader health	1.44	1.60	0.72	0.80	0.08	0.02
Drugs and alcohol	1.86	1.79	0.62	0.60	-0.02	0.29
Sense of belonging	1.63	1.81	0.54	0.60	0.06	0.04
Caretaking	1.52	1.53	0.76	0.77	0.01	0.83
Confidence	1.41	1.76	0.47	0.59	0.12	<0.01
Numeracy	0.78	0.94	0.39	0.47	0.08	<0.01
Cultural connection	2.12	2.53	0.53	0.63	0.10	<0.01

Table A13: Paired t-test for change in score for individual indicators, 18-24-year-olds (n=1035)

Indicator	Enrolment score	Latest score	Enrolment score (std)	Latest score (std)	Change (std)	p-value
Attitude	3.07	3.10	0.77	0.77	0.01	0.38
Learning new skills	1.39	1.39	0.70	0.69	0.00	0.72
Literacy	2.28	2.48	0.57	0.62	0.05	<0.01
Training	1.62	1.84	0.40	0.46	0.06	<0.01
Work experience	1.67	1.82	0.56	0.61	0.05	<0.01
Working with others	2.84	2.94	0.71	0.74	0.02	<0.01
Personal management	1.97	2.00	0.66	0.67	0.01	0.24
Challenging situations	1.62	1.74	0.54	0.58	0.04	<0.01
Economic obstacles	2.79	2.81	0.70	0.70	0.00	0.66
Job opportunities	1.89	2.02	0.63	0.67	0.04	<0.01
Housing	0.92	0.95	0.92	0.95	0.02	0.02
Influential people	2.97	2.99	0.74	0.75	0.00	0.75
Physical health	1.65	1.65	0.82	0.82	0.00	0.89
Broader health	1.62	1.60	0.81	0.80	-0.01	0.44
Drugs and alcohol	2.09	2.05	0.70	0.68	-0.01	0.11
Sense of belonging	1.81	1.82	0.60	0.61	0.00	0.62
Caretaking	1.40	1.45	0.70	0.73	0.03	0.05
Confidence	1.62	1.78	0.54	0.59	0.05	<0.01
Numeracy	0.95	1.00	0.47	0.50	0.03	<0.01
Cultural connection	2.37	2.51	0.59	0.63	0.04	<0.01

Table A14: Paired t-test for change in indicator scores, females (n=528)

Indicator	Enrolment score	Latest score	Enrolment score (std)	Latest score (std)	Change (std)	p-value
Attitude	3.07	3.11	0.77	0.78	0.01	0.24
Learning new skills	1.36	1.37	0.68	0.69	0.00	0.72
Literacy	2.38	2.54	0.60	0.64	0.04	<0.01
Training	1.54	1.78	0.38	0.44	0.06	<0.01
Work experience	1.55	1.75	0.52	0.58	0.07	<0.01
Working with others	2.83	2.96	0.71	0.74	0.03	<0.01
Personal management	1.94	2.02	0.65	0.67	0.03	0.02
Challenging situations	1.55	1.69	0.52	0.56	0.05	<0.01
Economic obstacles	2.86	2.84	0.71	0.71	0.00	0.75
Job opportunities	1.88	1.99	0.63	0.66	0.04	0.01
Housing	0.91	0.95	0.91	0.95	0.04	0.02
Influential people	3.02	3.03	0.76	0.76	0.00	0.94
Physical health	1.59	1.57	0.80	0.79	-0.01	0.49
Broader health	1.59	1.60	0.80	0.80	0.00	0.86
Drugs and alcohol	2.14	2.17	0.71	0.72	0.01	0.31
Sense of belonging	1.83	1.87	0.61	0.62	0.01	0.33
Caretaking	1.45	1.48	0.72	0.74	0.02	0.24
Confidence	1.61	1.74	0.54	0.58	0.04	0.01
Numeracy	0.89	0.96	0.45	0.48	0.03	0.01
Cultural connection	2.52	2.64	0.63	0.66	0.03	0.01

Table A15: Paired t-test for change in indicator scores, males (n=646)

Indicator	Enrolment score	Latest score	Enrolment score (std)	Latest score (std)	Change (std)	p-value
Attitude	3.00	3.11	0.75	0.78	0.03	0.01
Learning new skills	1.35	1.37	0.68	0.69	0.01	0.39
Literacy	2.12	2.40	0.53	0.60	0.07	<0.01
Training	1.55	1.83	0.39	0.46	0.07	<0.01
Work experience	1.62	1.77	0.54	0.59	0.05	<0.01
Working with others	2.76	2.91	0.69	0.73	0.04	<0.01
Personal management	1.89	1.95	0.63	0.65	0.02	0.05
Challenging situations	1.57	1.75	0.52	0.58	0.06	<0.01
Economic obstacles	2.72	2.79	0.68	0.70	0.02	0.06
Job opportunities	1.87	2.05	0.62	0.68	0.06	<0.01
Housing	0.94	0.96	0.94	0.96	0.02	0.12
Influential people	2.96	2.98	0.74	0.74	0.00	0.70
Physical health	1.67	1.71	0.84	0.85	0.02	0.19
Broader health	1.61	1.61	0.80	0.80	0.00	0.96
Drugs and alcohol	2.00	1.90	0.67	0.63	-0.04	<0.01
Sense of belonging	1.75	1.78	0.58	0.59	0.01	0.44
Caretaking	1.39	1.45	0.70	0.72	0.03	0.13
Confidence	1.59	1.80	0.53	0.60	0.07	<0.01
Numeracy	0.95	1.02	0.48	0.51	0.03	<0.01
Cultural connection	2.19	2.41	0.55	0.60	0.06	<0.01

Table A16: Paired t-test for change in indicator scores, Māori (n=910)

Indicator	Enrolment score	Latest score	Enrolment score (std)	Latest score (std)	Change (std)	p-value
Attitude	3.03	3.12	0.76	0.78	0.02	0.01
Learning new skills	1.36	1.37	0.68	0.69	0.01	0.44
Literacy	2.18	2.42	0.55	0.60	0.06	<0.01
Training	1.53	1.78	0.38	0.45	0.06	<0.01
Work experience	1.56	1.74	0.52	0.58	0.06	<0.01
Working with others	2.81	2.94	0.70	0.73	0.03	<0.01
Personal management	1.90	1.97	0.63	0.66	0.02	0.01
Challenging situations	1.58	1.75	0.53	0.58	0.06	<0.01
Economic obstacles	2.75	2.79	0.69	0.70	0.01	0.19
Job opportunities	1.87	2.01	0.62	0.67	0.05	<0.01
Housing	0.93	0.95	0.93	0.95	0.02	0.13
Influential people	2.99	3.00	0.75	0.75	0.00	0.98
Physical health	1.66	1.69	0.83	0.84	0.01	0.16
Broader health	1.65	1.66	0.82	0.83	0.01	0.61
Drugs and alcohol	2.04	2.00	0.68	0.67	-0.01	0.19
Sense of belonging	1.86	1.89	0.62	0.63	0.01	0.36
Caretaking	1.40	1.44	0.70	0.72	0.02	0.07
Confidence	1.64	1.81	0.55	0.60	0.06	<0.01
Numeracy	0.89	0.97	0.45	0.49	0.04	<0.01
Cultural connection	2.50	2.68	0.63	0.67	0.04	<0.01

Table A17: Paired t-test for change in indicator scores, Pacific (n=77)

Indicator	Enrolment score	Latest score	Enrolment score (std)	Latest score (std)	Change (std)	p-value
Attitude	3.06	3.09	0.77	0.77	0.01	0.75
Learning new skills	1.32	1.34	0.66	0.67	0.01	0.84
Literacy	2.27	2.31	0.57	0.58	0.01	0.69
Training	1.78	1.99	0.44	0.50	0.05	0.15
Work experience	1.56	1.82	0.52	0.61	0.09	<0.01
Working with others	3.03	3.03	0.76	0.76	0.00	1.00
Personal management	1.96	1.96	0.65	0.65	0.00	1.00
Challenging situations	1.62	1.94	0.54	0.65	0.10	0.00
Economic obstacles	2.82	3.00	0.70	0.75	0.05	0.13
Job opportunities	2.04	2.12	0.68	0.71	0.03	0.57
Housing	0.95	0.96	0.95	0.96	0.01	0.66
Influential people	3.17	3.18	0.79	0.80	0.00	0.92
Physical health	1.77	1.78	0.88	0.89	0.01	0.84
Broader health	1.71	1.65	0.86	0.82	-0.03	0.39
Drugs and alcohol	2.14	2.12	0.71	0.71	-0.01	0.75
Sense of belonging	1.84	1.91	0.61	0.64	0.02	0.60
Caretaking	1.61	1.51	0.81	0.75	-0.05	0.25
Confidence	1.79	1.88	0.60	0.63	0.04	0.41
Numeracy	0.99	1.10	0.49	0.55	0.05	0.16
Cultural connection	2.43	2.60	0.61	0.65	0.04	0.19

Appendix D – Regression tables

For outcomes, logistic regression was used to understand which factors were significantly associated with whether individuals were placed into EET (1) or remained NEET (0), and also whether individuals who were placed into EET went into employment (1) or education and training (0). The predictor variables were chosen given their relevance as potential indicators of long-term employment. The full model was retained due to the assumed relevance of all predictor variables, and to allow for comparisons between programmes.

Table A18: For HPR, factors associated with whether an individual achieved an employment outcome (1) vs educational/training outcome (0)

	Beta	SE	Z	p-value	Odds Ratio	OR Lower 95% CI	OR Upper 95% CI	df
(Intercept)	-1.79	0.80	-2.25	**0.025**	0.17	0.03	0.79	1429
Māori	-0.30	0.18	-1.72	0.086	0.74	0.52	1.04	1429
Pacific	0.12	0.19	0.64	0.524	1.13	0.78	1.66	1429
Gender diverse	-1.03	0.71	-1.45	0.148	0.36	0.09	1.55	1429
Male	0.26	0.13	2.02	**0.043**	1.29	1.01	1.65	1429
No qualification	-0.36	0.14	-2.59	**0.010**	0.70	0.54	0.92	1429
Age	0.12	0.03	3.51	<0.001	1.13	1.06	1.21	1429
Has dependents	-0.01	0.28	-0.03	0.978	0.99	0.58	1.74	1429
Expulsions or suspensions	0.31	0.13	2.35	**0.019**	1.37	1.05	1.78	1429
Has criminal conviction	0.02	0.25	0.07	0.942	1.02	0.63	1.69	1429
Months NEET	0.05	0.02	3.47	<0.001	1.05	1.02	1.09	1429
Learner licence	0.53	0.35	1.50	0.134	1.70	0.83	3.35	1429
No licence	-0.02	0.36	-0.07	0.945	0.98	0.47	1.95	1429
Restricted licence	0.98	0.39	2.52	**0.012**	2.67	1.22	5.68	1429
Has WINZ	-0.26	0.17	-1.54	0.124	0.77	0.55	1.07	1429
Completed or withdrew	0.27	0.15	1.76	0.078	1.31	0.97	1.77	1429

Table A19: For HPR, factors associated with whether an individual achieved an employment, educational or training outcome (1) vs remained NEET (0)

	Beta	SE	Z	p-value	Odds Ratio	OR Lower 95% CI	OR Upper 95% CI	df
(Intercept)	-0.85	0.62	-1.37	0.171	0.43	0.13	1.45	2409
Māori	-0.05	0.13	-0.34	0.730	0.96	0.74	1.24	2409
Pacific	0.49	0.15	3.16	**0.002**	1.63	1.21	2.21	2409
Gender diverse	-0.14	0.59	-0.25	0.806	0.87	0.28	2.86	2409
Male	0.30	0.10	3.07	**0.002**	1.35	1.12	1.64	2409
No qualification	-0.48	0.11	-4.47	<0.001	0.62	0.50	0.77	2409
Age	0.04	0.03	1.42	0.156	1.04	0.99	1.09	2409
Has dependents	-0.49	0.18	-2.64	**0.008**	0.61	0.43	0.88	2409
Expulsions or suspensions	0.10	0.10	0.97	0.333	1.10	0.90	1.35	2409
Has criminal conviction	-0.01	0.18	-0.07	0.944	0.99	0.70	1.41	2409
Months NEET	-0.01	0.01	-0.46	0.646	0.99	0.97	1.02	2409
Learner licence	-0.18	0.31	-0.57	0.567	0.84	0.45	1.52	2409
No licence	-0.68	0.32	-2.12	**0.034**	0.51	0.27	0.94	2409
Restricted licence	0.21	0.33	0.63	0.528	1.23	0.63	2.34	2409
Has WINZ	-0.39	0.13	-2.99	**0.003**	0.68	0.53	0.88	2409
Completed or withdrew	1.94	0.10	19.57	<0.001	6.98	5.76	8.50	2409

Table A20: For HPT, factors associated with whether an individual achieved an employment outcome (1) vs educational/training outcome (0)

	Beta	SE	Z	p-value	Odds Ratio	OR Lower 95% CI	OR Upper 95% CI	df
(Intercept)	-0.13	0.61	-0.22	0.827	0.87	0.26	2.90	2182
Total score	0.05	0.01	6.89	<0.001	1.05	1.03	1.06	2182
Māori	0.08	0.13	0.60	0.548	1.08	0.84	1.38	2182
Pacific	0.23	0.22	1.07	0.286	1.26	0.83	1.97	2182
Male	0.10	0.11	0.92	0.356	1.11	0.89	1.37	2182
No qualification	-0.01	0.12	-0.11	0.914	0.99	0.78	1.26	2182
Age	0.00	0.03	0.18	0.858	1.00	0.95	1.06	2182
Primary caregiver	-0.08	0.22	-0.39	0.700	0.92	0.60	1.43	2182
Expulsions or suspensions	-0.18	0.11	-1.63	0.104	0.83	0.67	1.04	2182
Has criminal conviction	0.26	0.18	1.46	0.144	1.30	0.92	1.85	2182
Months NEET	-0.04	0.01	-3.21	**0.001**	0.96	0.94	0.99	2182
No licence	-0.94	0.23	-4.03	<0.001	0.39	0.24	0.61	2182
Learner licence	-0.31	0.23	-1.38	0.168	0.73	0.46	1.13	2182
Restricted licence	-0.14	0.24	-0.59	0.553	0.87	0.54	1.37	2182
WINZ support	0.05	0.12	0.41	0.681	1.05	0.82	1.34	2182
Completed or withdrew	-0.05	0.11	-0.46	0.649	0.95	0.77	1.18	2182

Table A21: For HPT, factors associated with whether an individual achieved an employment, educational or training outcome (1) vs remained NEET (0)

	Beta	SE	Z	p-value	Odds Ratio	OR Lower 95% CI	OR Upper 95% CI	df
(Intercept)	3.90	0.46	8.56	<0.001	49.50	20.31	121.45	3266
Total score	0.02	0.00	4.40	<0.001	1.02	1.01	1.03	3266
Māori	-0.14	0.10	-1.49	0.137	0.87	0.72	1.05	3266
Pacific	-0.05	0.16	-0.29	0.769	0.95	0.70	1.31	3266
Male	0.12	0.08	1.41	0.157	1.12	0.96	1.32	3266
No qualification	-0.29	0.09	-3.19	**0.001**	0.75	0.63	0.90	3266
Age	-0.16	0.02	-8.36	<0.001	0.85	0.82	0.88	3266
Primary caregiver	-0.44	0.14	-3.18	**0.002**	0.65	0.49	0.85	3266
Expulsions or suspensions	-0.17	0.08	-2.06	**0.040**	0.84	0.71	0.99	3266
Has criminal conviction	-0.22	0.12	-1.86	0.063	0.80	0.64	1.01	3266
Months NEET	-0.04	0.01	-4.92	<0.001	0.96	0.94	0.97	3266
No licence	-0.39	0.17	-2.31	**0.021**	0.68	0.49	0.94	3266
Learner licence	-0.49	0.16	-3.14	**0.002**	0.61	0.45	0.83	3266
Restricted licence	-0.19	0.16	-1.17	0.241	0.82	0.60	1.13	3266
WINZ support	0.17	0.09	1.83	0.067	1.18	0.99	1.42	3266
Completed or withdrew	0.11	0.08	1.35	0.178	1.12	0.95	1.31	3266

For HPR outputs, logistic regression was used to understand which factors were significantly associated with whether individuals achieved an output (1) or not (0). The predictor variables were chosen given their relevance as potential indicators of long-term employment. The full models were retained due to the assumed relevance of all predictor variables.

Table A22: For HPR, factors associated with whether an individual achieved a work-readiness related output (1) or not (0)

work readiness	Beta	SE	Z	p-value	Odds Ratio	OR Lower 95% CI	OR Upper 95% CI	df
(Intercept)	1.17	0.57	2.07	**0.039**	3.21	1.08	9.88	1996
Māori	-0.08	0.14	-0.56	0.575	0.93	0.71	1.21	1996
Pacific	0.65	0.16	4.00	<0.001	1.92	1.40	2.66	1996
Gender diverse	-0.34	0.66	-0.51	0.609	0.72	0.20	2.86	1996
Male	-0.34	0.10	-3.39	<0.001	0.71	0.58	0.87	1996
No qualification	-0.65	0.11	-6.04	<0.001	0.52	0.42	0.64	1996
Age	-0.10	0.02	-4.44	<0.001	0.90	0.86	0.94	1996
Has dependents	0.17	0.19	0.89	0.373	1.19	0.82	1.74	1996
Expulsions or suspensions	0.30	0.11	2.88	**0.004**	1.36	1.10	1.67	1996
Has criminal conviction	0.23	0.19	1.20	0.230	1.25	0.87	1.82	1996
Months NEET	0.07	0.01	5.98	<0.001	1.07	1.05	1.10	1996
Learner licence	0.42	0.30	1.41	0.159	1.53	0.85	2.76	1996
No licence	0.27	0.31	0.88	0.377	1.31	0.72	2.40	1996
Restricted licence	0.73	0.32	2.29	**0.022**	2.08	1.11	3.91	1996
Has WINZ	0.21	0.13	1.61	0.107	1.23	0.96	1.59	1996
Completed or withdrew	0.98	0.10	9.70	<0.001	2.66	2.19	3.25	1996

Table A23: For HPR, factors associated with whether an individual achieved a NCEA related output (1) or not (0)

NCEA	Beta	SE	Z	p-value	Odds Ratio	OR Lower 95% CI	OR Upper 95% CI	df
(Intercept)	0.63	1.94	0.32	0.746	1.88	0.05	109.85	333
Māori	0.18	0.58	0.32	0.752	1.20	0.40	3.95	333
Pacific	-0.83	1.11	-0.75	0.453	0.43	0.02	2.68	333
Gender diverse	0.23	1.27	0.18	0.857	1.26	0.05	12.44	333
Male	0.27	0.39	0.69	0.491	1.31	0.61	2.85	333
No qualification	-1.48	0.47	-3.16	**0.002**	0.23	0.09	0.55	333
Age	-0.18	0.08	-2.16	**0.031**	0.84	0.70	0.96	333
Has dependents	0.73	0.62	1.18	0.238	2.07	0.59	6.80	333
Expulsions or suspensions	-0.40	0.41	-0.97	0.334	0.67	0.29	1.48	333
Has criminal conviction	0.64	0.84	0.76	0.446	1.90	0.32	9.39	333
Months NEET	0.18	0.05	3.88	<0.001	1.20	1.10	1.32	333
Learner licence	-1.05	0.76	-1.37	0.170	0.35	0.08	1.64	333
No licence	-1.48	0.82	-1.80	0.071	0.23	0.05	1.19	333
Restricted licence	-0.28	0.80	-0.36	0.723	0.75	0.16	3.75	333
Has WINZ	0.70	0.45	1.56	0.118	2.01	0.84	4.86	333
Completed or withdrew	1.23	0.53	2.32	**0.020**	3.41	1.30	10.52	333

Table A24: For HPR, factors associated with whether an individual achieved a life essentials related output (1) or not (0)

life essential	Beta	SE	Z	p-value	Odds Ratio	OR Lower 95% CI	OR Upper 95% CI	df
(Intercept)	1.95	0.64	3.06	**0.002**	7.04	2.05	24.97	1694
Māori	0.25	0.15	1.63	0.104	1.28	0.95	1.74	1694
Pacific	0.92	0.17	5.26	<0.001	2.51	1.79	3.55	1694
Gender diverse	0.05	0.62	0.08	0.935	1.05	0.31	3.67	1694
Male	-0.08	0.11	-0.80	0.426	0.92	0.75	1.13	1694
No qualification	-0.26	0.12	-2.20	**0.028**	0.77	0.62	0.97	1694
Age	-0.16	0.03	-5.91	<0.001	0.85	0.81	0.90	1694
Has dependents	0.14	0.21	0.65	0.516	1.15	0.76	1.74	1694
Expulsions or suspensions	0.25	0.11	2.17	**0.030**	1.28	1.02	1.60	1694
Has criminal conviction	0.56	0.22	2.55	**0.011**	1.75	1.15	2.70	1694
Months NEET	0.07	0.01	5.69	<0.001	1.08	1.05	1.10	1694
Learner licence	-0.10	0.32	-0.32	0.747	0.90	0.49	1.68	1694
No licence	-0.17	0.32	-0.54	0.591	0.84	0.45	1.59	1694
Restricted licence	0.44	0.34	1.30	0.192	1.55	0.80	3.01	1694
Has WINZ	0.33	0.14	2.29	**0.022**	1.39	1.05	1.85	1694
Completed or withdrew	0.81	0.11	7.35	<0.001	2.24	1.81	2.77	1694

Table A25: For HPR, factors associated with whether an individual achieved a qualification related output (1) or not (0)

qualification	Beta	SE	Z	p-value	Odds Ratio	OR Lower 95% CI	OR Upper 95% CI	df
(Intercept)	0.66	0.72	0.92	0.359	1.93	0.47	7.93	1747
Māori	0.15	0.15	0.95	0.341	1.16	0.86	1.56	1747
Pacific	0.02	0.17	0.09	0.925	1.02	0.73	1.41	1747
Gender diverse	0.65	0.63	1.03	0.304	1.91	0.56	6.86	1747
Male	0.04	0.11	0.34	0.733	1.04	0.84	1.29	1747
No qualification	-0.52	0.12	-4.26	<0.001	0.59	0.47	0.75	1747
Age	-0.15	0.03	-4.83	<0.001	0.86	0.81	0.92	1747
Has dependents	-0.06	0.22	-0.29	0.769	0.94	0.61	1.43	1747
Expulsions or suspensions	0.46	0.11	4.05	<0.001	1.59	1.27	1.99	1747
Has criminal conviction	-0.18	0.21	-0.89	0.375	0.83	0.56	1.25	1747
Months NEET	0.08	0.01	6.52	<0.001	1.09	1.06	1.11	1747
Learner licence	0.14	0.40	0.35	0.729	1.15	0.54	2.57	1747
No licence	0.11	0.40	0.27	0.785	1.12	0.52	2.52	1747
Restricted licence	0.10	0.42	0.24	0.813	1.10	0.50	2.55	1747
Has WINZ	0.58	0.14	4.06	<0.001	1.79	1.35	2.38	1747
Completed or withdrew	1.50	0.12	12.98	<0.001	4.49	3.58	5.64	1747

Table A26: For HPR, factors associated with whether an individual achieved an industry specific related output (1) or not (0)

industry specific training	Beta	SE	Z	p-value	Odds Ratio	OR Lower 95% CI	OR Upper 95% CI	df
(Intercept)	1.06	0.95	1.11	0.268	2.87	0.43	18.56	1039
Māori	-0.27	0.19	-1.40	0.162	0.76	0.53	1.12	1039
Pacific	0.22	0.22	1.01	0.313	1.24	0.81	1.90	1039
Gender diverse	0.11	0.93	0.12	0.904	1.12	0.14	6.98	1039
Male	-0.03	0.14	-0.23	0.820	0.97	0.73	1.28	1039
No qualification	-0.32	0.15	-2.07	**0.038**	0.73	0.54	0.98	1039
Age	-0.12	0.04	-3.15	**0.002**	0.88	0.82	0.95	1039
Has dependents	0.60	0.27	2.23	**0.026**	1.81	1.07	3.06	1039
Expulsions or suspensions	0.02	0.14	0.14	0.887	1.02	0.77	1.35	1039
Has criminal conviction	-0.22	0.27	-0.81	0.416	0.80	0.46	1.35	1039
Months NEET	0.00	0.02	-0.17	0.868	1.00	0.97	1.03	1039
Learner licence	0.28	0.54	0.50	0.614	1.32	0.48	4.24	1039
No licence	0.32	0.55	0.59	0.558	1.38	0.50	4.49	1039
Restricted licence	0.30	0.56	0.53	0.598	1.34	0.47	4.44	1039
Has WINZ	-0.08	0.18	-0.42	0.673	0.93	0.65	1.31	1039
Completed or withdrew	0.71	0.18	3.95	<0.001	2.03	1.44	2.90	1039

Table A27: For HPR, factors associated with whether an individual achieved a cultural related output (1) or not (0)

cultural	Beta	SE	Z	p-value	Odds Ratio	OR Lower 95% CI	OR Upper 95% CI	df
(Intercept)	-2.93	0.82	-3.56	<0.001	0.05	0.01	0.27	1386
Māori	0.82	0.18	4.68	<0.001	2.28	1.62	3.22	1386
Pacific	0.54	0.20	2.74	**0.006**	1.71	1.17	2.54	1386
Gender diverse	-2.00	0.93	-2.16	**0.031**	0.14	0.02	0.76	1386
Male	-0.19	0.13	-1.53	0.126	0.83	0.65	1.06	1386
No qualification	-0.07	0.14	-0.54	0.589	0.93	0.71	1.22	1386
Age	0.03	0.04	0.90	0.368	1.03	0.96	1.11	1386
Has dependents	-0.55	0.23	-2.35	**0.019**	0.58	0.37	0.91	1386
Expulsions or suspensions	0.23	0.13	1.82	0.069	1.26	0.98	1.63	1386
Has criminal conviction	0.06	0.22	0.26	0.796	1.06	0.69	1.66	1386
Months NEET	0.08	0.01	5.56	<0.001	1.08	1.05	1.12	1386
Learner licence	0.94	0.39	2.41	**0.016**	2.56	1.20	5.56	1386
No licence	0.69	0.40	1.72	0.085	1.99	0.91	4.41	1386
Restricted licence	0.86	0.42	2.05	**0.040**	2.36	1.04	5.44	1386
Has WINZ	-0.18	0.17	-1.05	0.296	0.84	0.60	1.17	1386
Completed or withdrew	1.47	0.12	11.77	<0.001	4.34	3.41	5.56	1386

Table A28: For HPR, factors associated with whether an individual achieved a soft-skill related output (1) or not (0)

soft skill	Beta	SE	Z	p-value	Odds Ratio	OR Lower 95% CI	OR Upper 95% CI	df
(Intercept)	-0.25	1.08	-0.23	0.816	0.78	0.09	6.52	760
Māori	0.63	0.23	2.69	**0.007**	1.88	1.19	3.00	760
Pacific	0.85	0.26	3.31	<0.001	2.35	1.43	3.93	760
Gender diverse	2.07	1.29	1.61	0.108	7.91	0.67	183.37	760
Male	0.03	0.17	0.20	0.842	1.03	0.75	1.43	760
No qualification	-0.58	0.18	-3.19	**0.001**	0.56	0.39	0.80	760
Age	-0.04	0.05	-0.82	0.411	0.96	0.88	1.05	760
Has dependents	-0.87	0.34	-2.54	**0.011**	0.42	0.21	0.81	760
Expulsions or suspensions	-0.07	0.18	-0.41	0.679	0.93	0.65	1.32	760
Has criminal conviction	-0.18	0.30	-0.60	0.546	0.84	0.47	1.50	760
Months NEET	0.03	0.02	1.57	0.117	1.03	0.99	1.08	760
Learner licence	-0.12	0.49	-0.23	0.815	0.89	0.34	2.35	760
No licence	-0.50	0.51	-0.98	0.326	0.61	0.22	1.65	760
Restricted licence	-0.12	0.53	-0.24	0.813	0.88	0.31	2.49	760
Has WINZ	0.23	0.25	0.92	0.359	1.25	0.78	2.05	760
Completed or withdrew	1.46	0.17	8.59	<0.001	4.31	3.10	6.04	760

Table A29: For HPR, factors associated with whether an individual achieved a drivers licence related output (1) or not (0)

driver licence	Beta	SE	Z	p-value	Odds Ratio	OR Lower 95% CI	OR Upper 95% CI	df
(Intercept)	-1.83	0.58	-3.14	**0.002**	0.16	0.05	0.50	2308
Māori	0.12	0.13	0.94	0.346	1.13	0.88	1.47	2308
Pacific	0.01	0.15	0.04	0.972	1.01	0.75	1.34	2308
Gender diverse	0.00	0.57	0.01	0.995	1.00	0.30	2.98	2308
Male	-0.07	0.10	-0.78	0.438	0.93	0.77	1.12	2308
No qualification	-0.54	0.10	-5.17	<0.001	0.58	0.47	0.71	2308
Age	-0.02	0.02	-1.00	0.317	0.98	0.94	1.02	2308
Has dependents	-0.28	0.19	-1.47	0.143	0.76	0.52	1.09	2308
Expulsions or suspensions	0.15	0.10	1.50	0.133	1.16	0.96	1.41	2308
Has criminal conviction	-0.02	0.18	-0.12	0.902	0.98	0.69	1.38	2308
Months NEET	0.03	0.01	3.14	**0.002**	1.04	1.01	1.06	2308
Learner licence	1.09	0.35	3.13	**0.002**	2.99	1.56	6.22	2308
No licence	0.92	0.36	2.59	**0.010**	2.51	1.30	5.28	2308
Restricted licence	0.85	0.36	2.32	**0.020**	2.33	1.18	4.97	2308
Has WINZ	-0.10	0.12	-0.80	0.427	0.91	0.72	1.15	2308
Completed or withdrew	0.71	0.10	6.84	<0.001	2.02	1.66	2.48	2308

Table A30: For HPR, factors associated with whether an individual achieved a wellbeing related output (1) or not (0)

wellbeing	Beta	SE	Z	p-value	Odds Ratio	OR Lower 95% CI	OR Upper 95% CI	df
(Intercept)	2.67	0.76	3.50	<0.001	14.44	3.38	67.66	1005
Māori	-0.68	0.22	-3.11	**0.002**	0.50	0.32	0.77	1005
Pacific	0.82	0.27	3.05	**0.002**	2.27	1.36	3.93	1005
Gender diverse	1.01	0.82	1.23	0.219	2.75	0.64	19.16	1005
Male	-0.31	0.14	-2.16	**0.031**	0.73	0.55	0.97	1005
No qualification	-0.36	0.15	-2.36	**0.019**	0.70	0.52	0.94	1005
Age	-0.10	0.03	-3.57	<0.001	0.90	0.85	0.95	1005
Has dependents	0.01	0.25	0.05	0.960	1.01	0.62	1.67	1005
Expulsions or suspensions	0.12	0.15	0.77	0.440	1.12	0.84	1.51	1005
Has criminal conviction	0.78	0.30	2.56	**0.010**	2.18	1.22	4.05	1005
Months NEET	0.07	0.02	4.17	<0.001	1.07	1.04	1.11	1005
Learner licence	-0.15	0.38	-0.39	0.698	0.86	0.41	1.79	1005
No licence	0.04	0.39	0.09	0.926	1.04	0.48	2.22	1005
Restricted licence	-0.25	0.40	-0.63	0.529	0.78	0.35	1.69	1005
Has WINZ	0.28	0.18	1.56	0.118	1.32	0.93	1.89	1005
Completed or withdrew	0.45	0.15	3.12	**0.002**	1.57	1.18	2.09	1005

Table A31: For HPR, factors associated with whether an individual achieved a pastoral care related output (1) or not (0)

pastoral care	Beta	SE	Z	p-value	Odds Ratio	OR Lower 95% CI	OR Upper 95% CI	df
(Intercept)	-3.26	0.66	-4.92	<0.001	0.04	0.01	0.14	2308
Māori	-0.34	0.15	-2.36	**0.018**	0.71	0.53	0.95	2308
Pacific	0.74	0.16	4.63	<0.001	2.09	1.53	2.86	2308
Gender diverse	-0.37	0.70	-0.52	0.600	0.69	0.15	2.50	2308
Male	0.26	0.11	2.34	**0.019**	1.30	1.04	1.62	2308
No qualification	-0.49	0.12	-4.07	<0.001	0.61	0.48	0.77	2308
Age	-0.04	0.03	-1.52	0.128	0.96	0.91	1.01	2308
Has dependents	0.30	0.20	1.49	0.136	1.35	0.91	2.01	2308
Expulsions or suspensions	-0.13	0.12	-1.15	0.252	0.88	0.70	1.10	2308
Has criminal conviction	0.16	0.20	0.81	0.420	1.17	0.79	1.72	2308
Months NEET	0.03	0.01	2.72	**0.007**	1.03	1.01	1.06	2308
Learner licence	0.73	0.38	1.90	0.058	2.07	1.01	4.60	2308
No licence	1.10	0.39	2.85	**0.004**	3.01	1.46	6.76	2308
Restricted licence	0.94	0.40	2.36	**0.018**	2.55	1.21	5.81	2308
Has WINZ	0.16	0.14	1.18	0.237	1.18	0.90	1.54	2308
Completed or withdrew	2.40	0.17	13.73	<0.001	10.99	7.91	15.71	2308

Appendix E – Programme success criteria

Table A32: Success criteria for the effectiveness of HPR and HPT.

Outcome dimension	Not meeting expectations	Achieving expectations	Exceeding expectations	Evidence used
Effectiveness: pathway				
Enrolling rangatahi that the programmes were designed to support	The programme is not enrolling sufficient proportions of rangatahi that the programme was designed to support.	70-85% of enrolled rangatahi are 15- to 24-year-olds who are NEET or have identified at least one indicator of long-term unemployment.	More than 85% of enrolled rangatahi are 15- to 24-year-olds who are NEET or have identified at least one indicator of long-term unemployment.	Programme monitoring data on participant demographics, NEET status at enrolment and indicators of long-term unemployment collected upon enrolment.
Employment, education and training	Minimal or no gains	Statistically significant improvement in employment, education or training outcomes for participants compared to similar non-participating rangatahi.	Large and statistically significant improvements	Impact estimates from the IDI comparing EET outcomes of participants and similar non-participants.
Social participation and connectedness, mental and physical wellbeing	Minimal or no gains	Statistically significant improvements	Large and statistically significant improvements	Supporting evidence from programme monitoring data about participant progression, however this will require qualitative evidence to make robust evaluative judgements.
Sustained employment	Minimal or no gains	Statistically significant sustained employment outcomes participants when compared to similar non-participating.	Large and statistically significant improvements	Impact estimates from the IDI comparing sustained employment outcomes of participants and similar non-participants.
Effectiveness: other benefits				
Benefit receipt; interaction with justice/corrections system	Minimal or no reduction	Statistically significant reduction in the numbers of participants when compared to other similar non-participating rangatahi.	Large and statistically significant reductions	Impact estimates from the IDI comparing benefit and corrections outcomes of participants and similar non-participants.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