

## Original Paper

# I've Changed, I'm Smarter: Empowering Youth to Thrive Neurosequential Approach to Employment, Education and Training Outcomes for Youth

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### **Abstract**

*This paper explores the impact of a neurosequential brain development approach on employment, education and training outcomes of vulnerable long-term unemployed youth, aged 15-24 years. The Empowering Youth to Thrive (EYTT) program utilises neuroscience research, which underpin varied creative and sensory and regulatory experiences used to engage youth in social and emotional learning. The aim is to enhance brain pathways to increase youth's higher order thinking functions such as problem solving, communication and critical thinking skills. These are considered necessary attributes for positive engagement in the current and future workforce. A bricolage methodology was used to evaluate the impact of the program, with findings determining the EYTT program had benefits for participants in gaining successful training, education and/or employment opportunities.*

### **Keywords**

*youth, employment, education, training, neurosequential, trauma*

### **1. Introduction**

The EYTT program is based on the work of Bruce Perry (2006) and Dan Siegel (2012). The program sought to respond to the need for a different approach to assisting youth into work, education or training. Youth unemployment is at a record high in Australia. Twelve percent are unemployed; twice the national unemployment rate and three times the rate of those aged over 25 years (Australian Bureau of Statistics (ABS), 2019). Youth hold higher qualifications than historically suggesting youth unemployment is impacted by variables other than qualification attainment.

Modernisation, globalisation, technology and a loss of junior roles have reduced the number of unskilled jobs available for youth creating greater competition for less jobs (Anglicare Australia, 2019). Increasing rates of depression and anxiety are also reportedly affecting employability (National Mental Health Commission, 2017). Unemployment can lead to social isolation, poor physical and mental health, social and behavioural difficulties, increased criminal involvement and representation in the justice system, reliance on income support, poverty, and homelessness (Mitchell Institute, 2017; Reeve, Marjolin, Muir, Powell, Hannigan, Ramia, & Etuk, 2016). Indeed, employment is a mitigator of disadvantage, providing increased wellbeing and potentially preventing cyclic disadvantage (Lamb & Huo, 2017).

Young people with lower educational attainment and minimal skills are most affected by changes to workforce opportunities. Precarious employment and changing employment pathways affect young people's capacities to contribute productively, creating financial and social burden for them and broader society (Payton, 2017). This is especially so for vulnerable youth who have experienced toxic stress as a result of Adverse Childhood Experiences (ACE) (Felitti, Anda, Nordenberg, Williamson, Spitz, Edwards, Koss, & Marks, 1998).

Cumulative stress created by ACE can weaken brain structure and function (Anda, Felitti, Bremner, Walker, Whitfield, Perry, Dube, & Giles, 2006). This has implications for life-long neurosequential development (Larkin, Shields, & Anda, 2012). ACE include violence, abuse, neglect and poverty related experiences (Felitti, Anda, Nordenberg, Williamson, Spitz, Edwards, Koss, & Marks, 1998). These stressors can impede brain development, particularly higher order thinking functions (Noble, Houston, Kan, & Sowell, 2012), which can engender behavioural difficulties, poor physical and mental health, low educational attainment, welfare dependency and/or substance abuse (Centre on the Developing Child at Harvard University, 2017). Quantity and duration of ACE impact the likelihood of neurosequential delays and lifelong accumulative affects (Felitti, Anda, Nordenberg, Williamson, Spitz, Edwards, Koss, & Marks, 1998).

The higher order brain regulates working memory and mental plasticity essential for skills such as problem solving, focus, concentration, adaptability, communication and self-regulation that increases capacities to engage in employment (Centre on the Developing Child at Harvard University, 2017). These skills are vital for long-term learning, positive health and wellbeing and social and emotional competence (Tomer, 2014).

Low level stress activates the brain's fight, flight, freeze response to manage threat (real or perceived) (Centre on the Developing Child at Harvard University, 2017). Toxic stress occurs when threat responses are prolonged "disrupting the development of brain architecture and other organ systems" (Centre on the Developing Child at Harvard University, 2017, p. 1). Mitigation of neurosequential delays as a result of prolonged stress occurs by building coping mechanisms and resilience through

supportive relationships with adults (Perry, 2009).

The absence of responsive adult attachments alters brain architecture and can lead to learning and behavioural difficulties (Gaskill & Perry, 2015). Seventy percent of genes are influenced by environmental experiences (Goleman, 2006). Schneider (2007) suggests “environmental factors and genes form a fully interactional system” (p. 91). Secure dedicated relationships provide positive, safe, and supported engagement that assist youth to feel protected and can prevent or reverse the damaging effects of toxic stress (Centre on the Developing Child at Harvard University, 2017). The earlier in life these relationships occur the more positive the outcome. Fostering meaningful, engaging relationships and attachments, which may not have previously been available to youth regulates youth’s brain function.

The EYTT program recognises that lower parts of the brain develop first and higher order thinking develops later (Perry, 2004). The majority of brain development occurs in the early years of life (Moore, Arefadib, Deery, Keyes, & West, 2017). Heightened stress leads to high production of cortisol and adrenalin impeding complex connections between the brain systems (Anda, Felitti, Bremner, Walker, Whitfield, Perry, Dube, & Giles, 2006). Evidence also exists that young people’s brains are still developing until the age of 25 (Arain, Haque, Johal, Mathur, Nel, Rais, & Sharma, 2013).

Positive experiences, interactions and environments create rapid brain development; disadvantaged environments and poor relationships impede brain function hindering capacities to engage positively with emotions and feelings and employ higher order thinking (Perry & Marcellus, 2004). The brain is capable of neuroplasticity; it can change and rebuild pathways if exposed to new, positive, ‘repetitive and patterned experiences’ (Perry & Marcellus, 2004, p. 2). The EYTT program utilises this information to provide a range of sensorimotor activities for participants.

Sensory exploration, music, rhythm, movement, creativity, mindfulness and positive attachments increase plasticity and calm the brain allowing access to higher order thinking (Gaskill & Perry, 2015). The intention of EYTT was to expand youths’ brain plasticity so they are more likely to learn new skills and develop dispositions for the possibility of future workforce participation. These activities were built into a physical, emotional and culturally safe weekly program consisting of four days of attendance from 9 am to 3 pm. The program followed the neurosequential brain pathway. That is, mornings consisted of lower brain focused activities such as ensuring the participants had sufficient rest and food, building to physical activity targeting the mid brain. This was followed by clinical arts therapy experiences targeting the limbic (emotional) area of the brain. Higher order thinking experiences were able to be introduced in the later part of the day when the lower order areas of the brain had been calmed and regulated.

The EYTT program aimed to provide new ways of engaging youth and builds their capacities in transferable workforce skills necessary for present-day and future jobs. Building young people’s

capacities in these attributes creates skills for multiple jobs (Torii & O'Connell, 2017). The gradual repair of underdeveloped brain pathways potentially generates new ways of thinking and being that creates greater potential to take on workforce opportunities. Forming supportive relationships with each participant was vital to the building of these capacities. In this context, supportive staff ratios of one facilitator to every three participants were built into the program enabling conducive relationships to be established between each participant and at least one staff member and other peers.

The EYTT program sought to motivate youth to learn through experiences that are “in a relationally safe context, and using adequate ‘dosing’ in a patterned, repetitive, rhythmic, and rewarding manner” (Gaskill & Perry, 2015, p. 188). Building brain pathways empowers youth to create the possibility of change to their life trajectory, particularly the possibility of workforce engagement. As knowledge holders of their own experience youth are engaged in reciprocal learning integral to the EYTT initiative. This establishes a relationship of openness and trust between the youth and facilitators (Reich, Liebenberg, Denny, Battiste, Bernard, Christmas, Dennis, Denny, Knockwood, Nicholas, & Hugh, 2017).

## **2. Method**

### *2.1 Methodology*

The EYTT project was a collaborative and consultative venture that constructed new knowledge about the understanding and skills required by professionals and practitioners to work with long term unemployed youth. Conclusions were drawn about the impact of using a neurosequential model of therapeutics in improving youth's wellbeing and subsequent employment, education and training outcomes. These were based on a multiple method, bricolage approach (Rogers, 2012).

The bricolage approach enabled opinions and perspectives to be sought and considered so that a new 'pedagogical space' (Kostogriz & Peeler, 2007) was possible. This is derived from Levi-Strauss's (1966) notion of creating projects using the different tools, methods and techniques available. A bricoleur then, requires knowledge of a variety of perspectives and approaches. Theoretical and interpretive bricolage reinforces the notion that reliable positions cannot be reached by the use of one perspective. It is not intended that the pieces of this program approach will fit together neatly. Rather, the bricolage approach assists with the management of disparate data that inform the process of explanation of this innovative program (Rogers, 2012).

To examine the EYTT program a methodological bricolage was used to underpin data collection and evaluation approaches. A guided reflection process, enrolment and case study data, and discourse about the program strengths and challenges undertaken with facilitators, created a patchwork of information that informed the research study. Evaluation of the program occurred with participants (n=136) through written, verbal, and survey responses about their experiences in the program and the changes that have

occurred for them. Ethical approval (GU:2017/663) was granted by Griffith University in line with the National Statement on Ethical Conduct in Human Research (National Health and Medical Research Council, 2018).

The researcher kept a journal of field observations. Qualitative and quantitative data was gathered to provide a more complete understanding of the research problem than using either method alone (Creswell, 2015), see table 1 of data used in the bricolage. These available qualitative and quantitative tools collectively allowed a multi-perspective evaluation of the program.

### 2.1.1 Data Collection and Recruitment

The multiple method used in this evaluation are summarised in Table 1.

**Table 1. Data Used in the Bricolage**

Individual Data	Program information
<ul style="list-style-type: none"> <li>• Background/enrolment information</li> <li>• Hope Scale</li> <li>• Most significant change question responses</li> <li>• Informal discussions</li> </ul>	<ul style="list-style-type: none"> <li>• Attendance data</li> <li>• Physical space</li> <li>• Practice</li> <li>• Skills, knowledge and qualifications of staff</li> </ul>
Researcher journal	
<ul style="list-style-type: none"> <li>• Informal discussions</li> <li>• Observations</li> <li>• Discourse</li> <li>• Participant engagement</li> <li>• Efficacy of experiences provided</li> <li>• Relationships</li> </ul>	

Qualitative data was gathered using program facilitator case notes and researcher journal notes about conversations, observations, relationships, program experiences, participant engagement and discourse and narrative from all stakeholders about the program. A qualitative interview question was posed to the participants each week; “What has been your most significant change this week as a result of participating in the program?” Participants provided written responses collected by the researcher.

Quantitative data was collected via surveys and attendance records. Participant attendance was collected from daily sign in and out sheets to determine program dosage for each participant. The Hope Scale (Synder, 1995) was administered to participants at the commencement and completion of the program. The Hope scale is a validated tool which according to Snyder (1995) recognises “hope is a construct based upon realistic evaluations about desires and the means to achieve them” (as cited in

Pacico, Bastianello, Zanon, & Hutz, 2013, p. 488). Higher levels of hope generate increased life satisfaction, healthier physical and mental wellbeing and improved academic outcomes leading to enhanced work performance and opportunities due to better coping strategies and problem-solving capacities (Pacico, Bastianello, Zanon, & Hutz, 2013). Pre and post-test scores were analysed using the non-parametric test, the Wilcoxon Signed Rank Test to determine if median differences represented a significant improvement.

Purposive sampling, which identified participants suitable for the program was used to recruit young people aged 15 to 24 years from job providers, Queensland Department of Youth Justice, Department of Human Services and community referrals. Community Liaison staff at EYTT connected with these organisations to recruit 136 participants - See Table 2 of participant recruitment numbers per cohort.

**Table 2. Participant Recruitment Numbers per Cohort**

Cohort	1	2	3	4	5	6
Number of participants	22	17	17	18	33	29

Eighty-nine participants (65.44%) successfully completed the program. In the interest of transparency about attendance, cohorts five and six consisted of 24 participants referred from Juvenile Justice who attended for one observation morning, after which the case worker determined the youth were not ready for this type of program. Five other participants attended for one enrolment day but did not commence the program. Cultural diversity of participants included Aboriginal, African, Anglo Australian, German, Maori, Samoan, Spanish and Torres Strait Islander.

#### 2.1.2 Limitations

Participant attendance ranged from 1-4 days per week and this variable attendance potential limited the data able to be collected. A member of the research team attended the EYTT program once a week to collect data limiting information to those participants attending on the day of data collection. Hope Scale surveys were disseminated by the researcher and the EYTT team to maximise opportunities to ensure data was collected from all program participants, however, only 42 matched pairs were available for analysis. Limitations in reach were evident for some participants that required parental or guardian consent, which was not able to be obtained. Therefore, data about participants under 18 years old or those in foster/out-of-home care were not available.

Not all participants provided answers to the 'most significant change' question or they responded with 'I don't know' at times, resulting in missed data. Literacy concerns caused writing difficulties for some participants. This was mitigated by the researcher obtaining verbal responses from the participants. Participants who did not feel comfortable to do this did not provide a response resulting in some further data losses. Follow-up with participants about their employment, education and/or training status 12

months from completion of the program proved difficult due to contact issues. Data about participants employment, education and/or training status is at one month after completion of the program.

### 3. Results

Inductive frequency analysis of qualitative data identified key themes relating to neurosequential development and workplace transferability skills. These were obtained from the written documentation of conversations and observations, and 'significant change' question responses collected.

The young people expressed what they have gained from the program through written responses to the question "What has been your most significant change this week as a result of your participation in the program?" The responses from all cohorts were collated and the following themes emerged:

#### *Confidence*

"Confident. I feel more motivated in my life and has given me a routine throughout my days. I've been eating heaps and I've felt like I'm changing as a person by being more motherly. More happier and loving life". Participant 6.1

#### *Motivation*

"More motivated. See life differently, happier, motivated, opening more doors/opportunities. Got my licence, reached my goal, socialise more, confident, happy". Participant 2.4

"I feel like this program is really helping keep me motivated, positive and focused! I'm feeling happy and even more motivated. I feel more confident. I have been feeling happier lately, but sad about the program ending soon. I have been sleeping better and doing more things". Participant 3.1

#### *Emotional changes*

"I changes a lot. Feeling much better. My mum really notices that I'm much happier when I come home from here. Anger control. When I first came here, I was scared and I happy to be here. My emotions are stable". Participant 3.4

#### *Lifestyle Changes*

"I have progressed over the past week in a positive way. I have changed my lifestyle by becoming healthier and have improved my relationships with family and friends. Overcoming barriers. Getting out of my comfort zone. I was able to achieve something I thought I couldn't". Participant 4.6

#### *3.1 Neurosequential Changes*

Neurosequential pathways development charts were developed from the writings of Bruce Perry (2006). Participants' confidential responses to the weekly question: "What has been your most significant change this week as a result of your participation in the program?" were frequency analysed against a coded list to determine changes to the youths' neurosequential development as a result of participating in the program. Table 3 identifies the frequency count for respective neurosequential pathways development. The most frequent responses across all neurosequential areas were self-awareness;

improved mood; confidence; improved attitude; and increased sense of safety/survival. Most frequent responses for limbic/amygdala areas were mood; confidence; attitude; relationships; and emotions. The most frequent responses for cortical areas were awareness; affiliation; attachment/belonging; self-regulation; and goal setting.

**Table 3. Identified Neurosequential Pathways Development and Frequency Counts**

Neurosequential pathways				
Brainstem/survival	Frequency count	Midbrain/physical	order	Frequency count
B4 Safety/ Survival	117	M9 Language		48
B3 Physical Health	45	M4 Gross motor skills		27
B2 Rest/sleep	24	M2 Movement		20
B6 Hearing/auditory function	19	M1 Co-ordination		19
B5 Sight/vision	13	M5 Fine motor skills		14
B1 Food/nutrition	12	M6 Proprioception/force		13
B7 Touch/tactile	12	M3 Spatial awareness		11
B8 Taste/texture	7	M7 Vestibular function		4
B9 Smell/olfactory	0	M8 Balance		4
		M11 Patterning		4
		M12 Repetition		4
		M10 Crossing mid line		2
Limbic/ Amygdala/emotional	Frequency count	Cortical/higher thinking	order	Frequency count
L1 Mood	143	N4 Awareness		166
L11 Confidence	134	N3 Affiliation		83
L10 Attitude	128	N1 Attachment/belonging		81
L9 Relationships	107	N2 Self-regulation		79
L2 Emotions	104	N12 Goal setting		61
L8 Communication	90	N10 Planning		55
L13 Optimism	81	N13 Focus & attention		50
L12 Independence	53	N11 Prioritising		47
L3 Threat (Fight, Flight, Freeze)	35	N6 Respect		38
L4 Anxiety	32	N8 Problem solving		31



L7 Stress	26	N17 Literacy	29
L5 Arousal	13	N14 Memory recall	29
L6 Fear response	7	N5 Tolerance	27
		N16 Impulse control	22
		N7 Critical thinking	19
		N15 Multi-tasking	13
		N9 Negotiation	2

### 3.1.1 Transferability Skills Development

A transferability skills chart was developed from a range of articles about the skills needed for current and future jobs (for example, Committee for Economic Development of Australia 2015; Social Ventures Australia 2016; The Foundation for Young Australians, 2017). Table 4 presents the frequency counts of work transferability skills development observed. Transferability skills are considered generalised proficiencies able to be utilised across a range of jobs. Participant responses to the question “What has been your most significant change this week as a result of your participation in the program?” were frequency analysed against the skills list to determine the most recurrently developed skills of the youth as a result of participating in the program. Most frequent responses of transferability skills were in relation to self-awareness; opportunity awareness; self-regulation; sociability; and decision making, learning, and confidence. The most frequent responses for cognitive skills were opportunity awareness; decision making; learning; problem solving and reasoning. Most frequent responses for communication and social/emotional skills were sociability; emotional intelligence; comprehension; collaboration and teamwork; and written and verbal presentation. The most frequent responses for personal behaviours skills were self-awareness; self-regulation; confidence; integrity/honesty; and self-management.

**Table 4. Work Transferability Skills Development and Frequency Counts**

Work Transferability skills					
Cognitive skills	Frequency count	Communication and social/emotional skills	Frequency count	Personal behaviours	Frequency count
C5 Opportunity awareness	136	S1 Sociability	123	P2 Self-awareness	229
C1 Decision making	121	S8 emotional intelligence	120	P8 Self-regulation	124
C8 Learning	121	S5 Comprehension	78	P4 Confidence	121
C4 Problem solving	37	S4 Collaboration and teamwork	66	P5 Integrity/honesty	103

C3 Reasoning	54	S3 Written and verbal presentation	46	P3 Self-management	92
C2 Creativity	42	S2 Listening to understand	41	P11 Persistence	87
C9 Curiosity	26	S7 Caring	20	P1 Responsibility	82
C7 Innovation	13	S6 Empathy	13	P12 Motivation	71
C6 Digital literacy	7			P9 Determination	65
				P10 Initiative	32
				P7 Time management	29
				P6 Tolerance	21
				P13 Flexibility	12

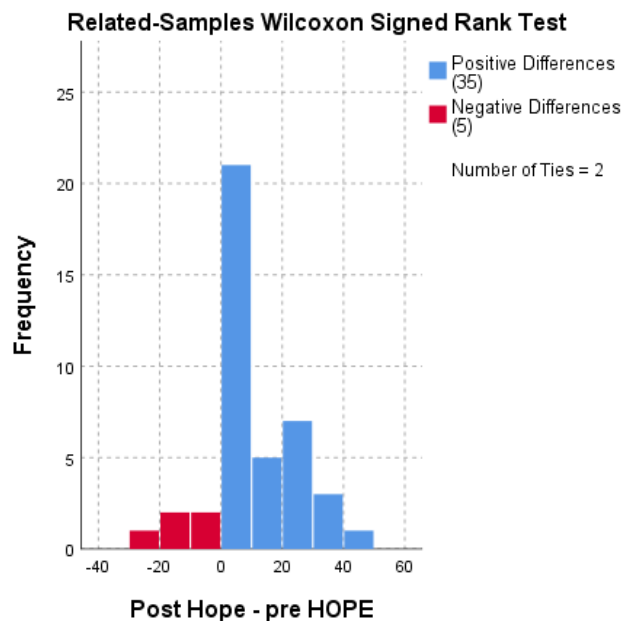
The analysis of journal notes revealed the most frequent observations, relating to participants, were about non-judgment, acceptance and their sense of belonging (feeling like a family). The relationships formed between staff and participants and between the participants and their peers was seen by participants as pivotal to their success in the program. Creating a safe, calm and inclusive space that met participants needs through consultation with participants was intentional in the program's design and indeed this appeared to reduce participants' fear and stress and create a sense of belonging and emotional safety.

Quantitative analysis of Hope Scale data enabled comparison of participants feelings of agency, pathway and hope on entry and completion of the program. Pathway scores identify participants' thinking about the possible options available to achieve desired goals (Snyder, 2000). Agency scores identify motivation and self-belief in participants' capacity to achieve those goals. The integration of pathway and agency thinking produces a measure of hope. High hope individuals view 'barriers as challenges to overcome and use their pathway thoughts to plan an alternative route to their goals' (Snyder, 1994, as cited in Snyder, 2000, p. 10).

The median scores and interquartile range for the pre and post administrations of the Hope Scale (n=42) are presented in Table 5. The results of the Wilcoxon Sign Rank Test revealed that median differences were significant ( $z=4.115$ ,  $p \leq 0.001$ ). As indicated in Table 6, there were positive differences observed for 35 participants, a negative difference observed for five participants and scores for two participants were unchanged. Overall, results indicate that the program had a positive effect on participants as measured by the Hope Scale.

**Table 5. Median Scores and Interquartile Range pre and post Hope Scale across all Cohorts**

	Median	Interquartile range 25%	Interquartile range 75%
Hope Scale pre-measure (baseline)	20.5	17	26.5
Hope Scale post measure	28	24	37.5



**Figure1. Patterns of Positive and Negative Differences in Hope Scale Scores Observed**

Sixty-five participants (60.75%) obtained work opportunities or engaged in education and training either during or soon after completing the program. The remaining participants—19 are not employed nor in education and training and 23 have status unknown. The young people who did not complete the program were evidently impacted by external variables such as family violence, substance abuse, homelessness, mental health, disability, juvenile justice, out of home care, and/or family relocation.

**4. Discussion**

The results of this program recognise that the brain is impressionable during all stages of life (Flores, 2010) and shaped by early attachment and ongoing relationships and amenable to conducive, well-designed programming and support. As already recognised in the literature, relevancy and

intensity of experiences create motivation, potentially generating more rapid brain development changes (Kolb & Muhammad, 2014). Music experiences are strong motivators important to neurosequential programs (Kolb & Muhammad, 2014). The EYTT program provided music, movement, art therapy and mindfulness in a physically, emotionally and culturally safe learning space, to engage participants, who reported increased social, emotional and cognitive skills that potentially lead to engagement in employment, education and training. The data indicated that the more attendance/experiences for participants, the more likely they were of having successful outcomes. The observed relevancy of experiences to help engage and motivate participants in attendance were therefore considered key to this success.

A number of practical considerations regarding participants' individual life circumstances were addressed to support their maximum participation in the program. Circumstances included not having a current driver's license and/or photographic identification nor access to a vehicle for transport, which made it difficult for participants to access support services, attend the EYTT program and attend job interviews. The EYTT mitigated this by providing minibus transport and assisting participants to negotiate the pathways to obtaining a driver's license and/or identification cards. Limited access to telephone and/or email was another consideration. While participants may have had phones, often they did not have credit nor access to internet for email contact. Participants not receiving welfare benefits often did not have a bank account. As intensity of experiences impact outcomes, it was deemed important to participants' successful outcomes that barriers to their participation be mitigated as much as possible. This is also considered a critical success factor in the program's success.

Participants were found to have very complex needs. External barriers included a lack of stable housing, youth justice engagement, domestic/family violence, neglect, physical and/or sexual abuse, significant family/carer responsibilities, mental health, substance abuse, health and developmental issues, and literacy and numeracy concerns. These issues were often identified later in the program when a trusting relationship had been established and participants felt safe to disclose. Staff were able to observe behaviours indicating these issues as they became more familiar with the participants. Daily progress meetings sans participants were held to discuss planning, so all staff were familiar with individual needs of participants and to provide continuity in neurosequential experiences. Individual program plans combining case notes, identified participant needs, and detailed personal history were developed for each participant. Support agencies were engaged to assist participants when deemed necessary. It was important to gain information about the participants to 'shape staff practices that strengthen relationships..., enhance personal safety...and [provide] services to vulnerable individuals...as early as possible' (Leitch, 2017, p. 1).

Delivering an innovative program required thoughtful planning about staff constitutions, experience, skills, knowledge and qualifications. Facilitators recruited for the EYTT program had varied capacities

to engage with youth and provide a neurosequential informed program. Staff of diverse experience, gender, culture, age, education and artisanship allowed for diverse participants to feel a sense of connection and belonging. Knowledge sharing between staff, and staff and participants provided distinct experiences of interest and intensity to motivate participants to regularly attend the program, improve their neurosequential development and work transferability skills potentially improving their employability outcomes.

#### *4.1 Future Considerations*

Critical reflection of program implementation and outcomes suggest the program's approach was overall successful in engaging youth in employment, education and training. A number of future considerations were also identified. Staff availability to contact potential employers and attend workplaces was limited due to the 1-on-1 engagement needed with participants in the program. EYTT was successful in engaging large corporate organisations. Smaller businesses were also approached. These were only willing to accept job ready young people. Small family owned businesses became committed to the project and the participants they met; proving the most successful in meeting the employment needs of participants. This suggests further opportunities to engage more formal and informal supports in the design of such program in the future is needed.

It is recommended further research, including longitudinal studies be undertaken on the benefits of neurosequential-based programs in improving youth employment, education and training outcomes. Accessing social enterprise workplaces may be beneficial to creating collaborative approaches to the program by interlinking other community employment programs. A longer-term aim of training future neurosequential program facilitators and mentors may also be beneficial to youth employment, education and training outcomes.

The twelve-week EYTT program included follow up mentoring with participants for 12 months after completion. Transience of some participants and their families resulted in loss of contact. Contactable participants responded well to the mentoring process and some returned to the program as mentors (n=12). Staff and participants felt an increased duration of the program would be beneficial. Participants felt an improved sense of confidence and skills capacity in the last 3-4 weeks of the program and felt a longer timeframe would bring them to a greater level of success in job outcomes. Staff also felt that more disadvantaged youth would benefit from an increased duration of neurosequential learning and support to achieve full job readiness. Once neurosequential development has improved sufficiently to access the higher brain areas necessary for reading, writing and problem-solving, attendance in programs to improve literacy and numeracy would be beneficial.

## **5. Conclusion**

The EYTT program intended to increase the workforce engagement, training and education capacities of participants who were identified as having complex needs. Evaluation shows use of the neurosequential model of therapeutics was critical to the development of the program. Relationships formed between facilitators and the young people participating were pivotal to the success of the program. Most notably, the EYTT program observed numerous benefits for participants in relation to their success in gaining further training, education and/or employment opportunities.

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