Conscious Care and Support (CCS)
Demonstration Project
2016 - 2018

Research Findings and Outcomes

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Executive Summary

Overall Conclusions

The findings from the research strongly conclude that the CCS program has significant influences on people who have autism or other developmental disabilities. Through the strategies and techniques garnered from the CCS program, supporters can significantly influence individuals with challenging behaviours through prevention, reduction and management of agitation, anger and aggression to become calmer and focused with overall improvement in their quality of life.

The evidence presented in the research demonstrates highly positive results. Almost all six agencies reported significant improvements in their knowledge, skills and dispositions to effectively de-escalate challenging behaviour and work effectively with individuals with challenging behaviours to improve their quality of life. Most of the participants in five of the six agencies had successfully implemented learnings from the CCS program and experienced a decrease in the number of actual assault cases by the persons they supported.

The research evidence clearly illustrated how the CCS program has indirectly benefited an individual with challenging behaviour who was not included in the project as well as those who were not participants of the training. What this tells us is that the training is transferable and can make a greater impact on Ontario in general.

Key Findings from Pre-Post Surveys and Focus Groups

As a result of CCS training, findings of the research study conducted by independent researcher Vera Azad, Ph.D. (*see Appendix II – Final Research Findings for Conscious Care and Support Demonstration Project*) confirmed the following significant changes in individuals with a disability and their supporters who participated in the CCS program:

a) Decreased number of assault cases by persons with challenging behaviour.

Most of the participants in five of the six agencies indicated a decrease in the number of actual assault cases (e.g. flipping chairs, hitting people, aggressing towards staff etc.) by the persons they support.

Amongst other things, the following were associated with the decrease in actual assaults:

i. Supporters' implementation of techniques to limit environmental toxins (e.g. limiting use of electronic devices);
ii. Medication for mental health (e.g. a medical prescription to manage bi-polar disorder);
iii. Dietary changes for the person supported (e.g. lowering the amount of sugar intake);
iv. Supporters recognizing triggers more easily and faster and giving persons supported what they need in order to reduce their anxiety; and
v. Increased self-confidence for supporters in meeting the needs of people with challenging behaviour.

Quotes from Focus Group Discussions:

"I find that I actually got hit physically less. Personally, I used to get hit a lot. And I don't think I've been hit, maybe once or twice since the training. And normally it'll have been at least once, twice a week or a few times."

"She hasn't assaulted herself. I don't know if it's based on familiarity of staff is not changing all the time… The threats aren't there. They haven't been there for the last I would say since significantly since Conscious Care she hasn't threatened in that way at all."

b) Participants learned a lot of things that were not taught in school (college) or not offered in other professional training sessions (e.g. mindfulness, how the brain and stomach interact differently, electromagnetic fields, etc.).

Mindfulness has been shown in this study to help supporters to:

i. Be aware of themselves and the moment, calm themselves and give persons supported the time to process information in order to limit aggressive behaviour;
ii. Change their perspective and the way they respond to what's going on as opposed to changing what is going on in order to give persons supported a better opportunity for a better life;
iii. Have a compassionate approach to letting persons supported know they can feel free to talk or cry; and
iv. Catch triggers of anxiety and address them before people they support become aggressive or self-abusive.

Quotes from Focus Group Discussions:

"I think people are recognizing now whereas before things would have blown up. I think there's been quite a few incidences with [name] that things could have escalated but the team's mindfulness has helped keep it here. As well as their ability to recognize her triggers has helped it to not escalate."

"Just the compassionate approach…letting them know that you're here to listen to them whether they want to talk, cry, you're just there to help them though whatever it is they need. I think it's helped me with a relationship with a lady and like we have a really good report as well as you know like um I just think they're is a more personal connection sometimes now that we are really looking in depth and trying to get to the bottom of a lot of things, help."

c) Mindfulness and faulty filters are the most significant benefit of CCS training on the supporters' ability to support people with challenging behaviours.

Survey data revealed that there was remarkable improvement in supporters' states of awareness, emotional competence and emotional self-regulation across all six agencies. This has proven to be essential for effectively de-escalating and managing individuals with challenging behaviours as espoused in focused group interviews.

Quotes from Focus Group Discussions:

"I think the difference that the training has made to the people that we support is it's helped us as support workers to be more understanding. To be more thoughtful and realize that people don't choose to have difficult days or difficult moments that there's something else going on. So it's helped us to be more understanding and compassionate and to think about how that person must feel…"

"I think increase in the meditation and the calming yourself you know what you take into your home. We had an opportunity to share it with all of the support workers at [name of support location] and we've implemented before our team meeting, we do a mindfulness exercise and you know I was very excited to take it home and share some of the information with my family…"

d) Nutrition (with dietary changes e.g. lowering sugar intake, lowering gluten intake and adding supplements) and exercise (e.g. walking) have significant impact on persons supported.

Most of the primary individuals in each agency have become calmer and more focused since anxiety had decreased following changes in diet.

Quotes from Focus Group Discussions:

"He, we went from using a suppository every day to every other day. And prior to the changes in food, we did not see results on the days he did not receive the suppository. Once we like I said we've slowly introduced these things, on two occasions out of a month, he has gone on his own without the suppository. It is an improvement. It's only twice but it is an improvement."

"[Name], because of Conscious Care now sees a naturopath and our first couple of visits she had some pretty big concerns, one being some pretty severe sensitivities to foods that we might not have thought about; tomatoes being one of them. Also he needed a liver detox and a few things that were rating pretty high so he was on some stuff for those things and I think I've noticed. I did notice so we went to the naturopath and he had dinner and put ketchup all over it and right after that, he had severe anxiety. So that was before we implemented it and right after we found out that ok I'm seeing this, this is real… I see a difference when he eats them. That's all I can say for sure… I know he hasn't complained or asked to vomit in the toilet like he had been before so that's something that we see that's concrete, which is good."

e) Overall improvement in the quality of life of most of the persons supported.

The following changes in people with challenging behaviours were identified in the focus groups:

i. Communicating better and clearer;
ii. Sleeping better;
iii. Walking (going out for walks);
iv. Being calm, focused and happy;
v. Interacting more with supporters (staff) and people (e.g. strangers in one case) within the community; and
vi. In the case of one supporter, opening their eyes as opposed to walking with closed eyes in the past and bumping unintentionally into staff.

Quotes from Focus Group Discussions:

"Well [name] typically engages in a lot of self-injurious behaviour. When he first came, that involved him throwing himself on the floor, hitting himself in head and his body, biting himself really bad and he was bleeding. We've noticed that although the amount of incidents haven't decreased hugely, the duration of them have decreased quite a bit and the intensity have decreased quite a bit. So now if he bites he very rarely breaks his skin. He's not jumping to the floor hardly at all and his incidences turn to be more like here [reference location], where before it'll be like all over the place."

"Us being more calm as well has improved their quality of life because they're not getting as anxious as they were before so it's kind've like were rubbing off on them…Increase in their quality of life…The people have more control over their lives because we're not trying to set it we're trying to understand what they want and put things in place that we see that their wishes are being met."

"I find that the quality of his life has improved, like he's interacting more with social activities… and initiating them…Yeah, before he never used to do that…He was somebody that we thought you know this is gonna be the way he's going to be for the rest of his life but then it's

like wow he's a different person…Because how many different things did we try with the same end result, until this [CCS] came along."

The outcomes of this evaluation begin to provide and measure a more accurate understanding and application of evidence-based practices that will both enhance the actual quality and quantity of services and treatments. While the process of Quality Assurance Measures (QAM) successfully evaluates implementation of service systems within service providers across Ontario, given that there is virtually no independent research to validate the current models of support services and treatment, the outcomes garnered from this research are considered to be quite significant and important.

Final Research Findings for Conscious Care and Support Demonstration Project

The report below by independent researcher Vera Azah, Ph.D. contains the research findings from the 18 month Conscious Care and Support demonstration project. The outcomes of this evaluation begin to provide and measure a more accurate understanding and application of evidence-based practices that will both enhance the actual quality and quantity of services and treatments.

Conscious Care and Support (CCS) Survey

Community Living Chatham-Kent, Community Living Kingston & District,
Ongwanada, Community Living Prince Edward,
Community Living St. Marys & Area and Community Stratford & Area Agencies

Objective of Research: To evaluate the qualitative and quantitative outcomes of the implementation of Conscious Care and Support.

The following four research questions guided the development of the instruments for evaluation of the Conscious Care and Support project;

Research Questions (RQ):

1. Is there a decrease in the amount of physical expressions of agitation, anger and aggression (AAA) or other concerns because of CCS interventions?
2. Is there an increase in quality of life because of CCS interventions?
3. Is there a decrease in the amount of days off of work/recovery time for staff because of Conscious Care and Support Interventions?[1]
4. Is there an increase in job satisfaction, job performance, safety, perceived emotional security and overall quality of life because of CCS interventions?

The first two research questions (RQ1 and RQ2) are related to outcomes for persons with disabilities supported and the last two questions (RQ3 and RQ4) are related to outcomes for direct supporters.

This report is divided into three parts: Part A describes the demographics of the participants. Part B illustrates survey results of participants' knowledge, skills and practices before and after the CCS training and Part C describes findings and discussion of focus group, conclusions and recommendations.

[1] This variable of investigation was omitted at this stage as the length and structure of the demonstration project could not accurately assess this evaluation.

Part A. Research Methodology and Demographics of Participants Research Methodology

Sampling Method: Purposive sampling technique was used to identify six community living agencies in Ontario (Community Living Chatham-Kent, Community Living Kingston & District, Ongwanada, Community Living Prince Edward, Community Living St. Marys & Area and Community Living Stratford & Area) to participate in the demonstration project. From these six agencies, 29 individuals supported (including six individuals who were deemed as either medium or high risk and supported by a behaviour support plan), 120 direct supporters (including family members, direct support professionals, facilitators, team leaders, behaviour therapists and a treatment counsellor) and 40 supporters in positions of leadership or administration (including chief officers, directors, managers, supervisors, a board member and an executive assistant) participated within the demonstration project.

Research Methods/Design/Data Collection

Both quantitative and qualitative data collection methods were used to show the connection between CCS training and improved trainees' knowledge and skills and improved quality of life for people with challenging behaviours.

Quantitatively, two separate surveys (pre-training and post-training) were conducted for each of the six agencies beginning 2016 and ending 2017. Both surveys were designed and administered via SurveyMonkey. The pre-training survey was administered in each of the six agencies to assess the knowledge and skills of supporters prior to their CCS training sessions and the post-training survey was administered to each of the six agencies immediately after their respective completion of the CCS training sessions.

Qualitative data was collected throughout the training program using multiple sources of evidence: focus groups, participants' learning records, participants' written outcomes and documentation. The qualitative data provides in-depth knowledge of what the supporters have learned through the CCS program, any changes in their knowledge, skills and practices; observable changes in behaviour of persons supported with challenging behaviour.

Analysis Procedure: Descriptive statistics and t-tests were used to analyze the quantitative data and the qualitative data was analyzed using common themes and outliers derived from the focus groups.

Confidentiality and Anonymity: For confidentiality and anonymity purposes, participants were informed prior to the study that their names would not be recorded during the evaluation process but relevant background information such as name of agency, names of persons supported and position of supporters will be collected for identification and comparison where necessary. Data collected from the surveys and case studies will be kept under lock and key at the office of the researcher and discarded after 5 years following the research.

Demographics of Participants

The survey was administered at each of the six agencies on two occasions: before and after the CCS training. The sample sizes of respondents in each location are displayed in Table 1. As can be seen from this table, the number of respondents to the questionnaire after the training was smaller than the number of respondents before the training in each of the six locations.

Table 1. Sample Size of Survey Participants

Location	Pre-training	Post-training
Kingston	26	13
Ongwanada	27	12
St. Marys	21	19
Stratford	22	17
Prince Edward	31	27
Chatham-Kent	24	23
Total	151	111

Figure 1: Current Role in Organization Pre-Training

In all six agencies, over half of the CCS training participants were direct support professionals. Managers were represented across all six agencies. Other than in one agency (Community Living Chatham-Kent), supervisors were also represented in all other five agencies. Even though there is only family representation from Community Living Prince Edward illustrated through the data collection of the survey (shown on Figure 1), there was family representation at various trainings: one family supporter from Community Living St. Marys & Area, one family supporter from Community Living Stratford & Area, one family supporter from Community Living Kingston & District and three family supporters from Community Living Prince Edward. In five of the six agencies (except Community Living Stratford & Area), participants identified "other" positions in their organization to include: house/residential/day program facilitator, behaviour therapist, treatment counsellor, chief clinical and planning officer, director, youth facilitator, planning facilitator and team lead.

Figure 2: Current Role in Organization Post-Training

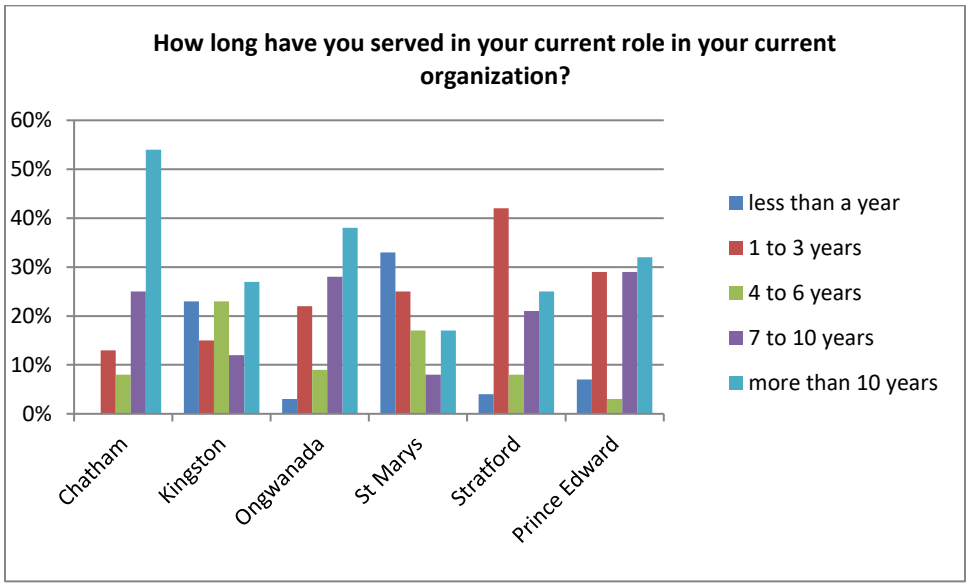
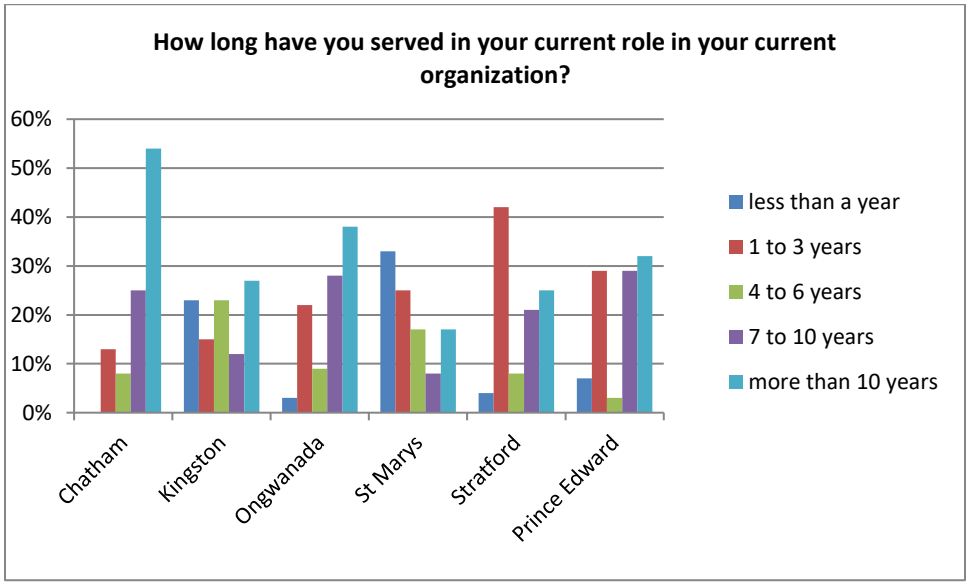
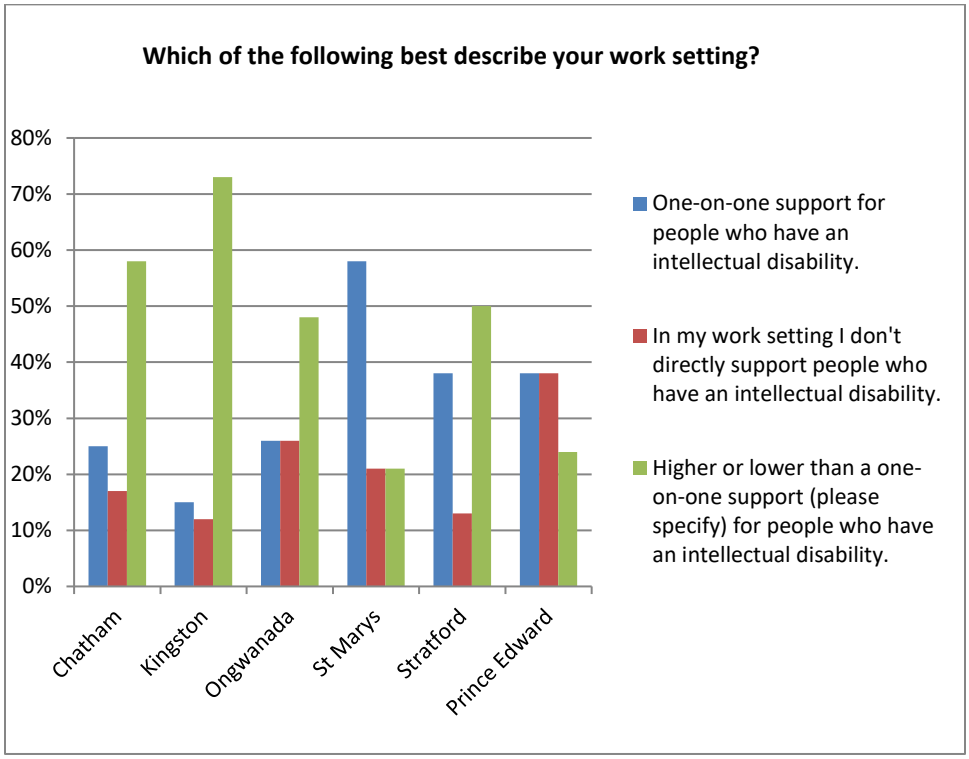


Figure 3: Number of Years Served in Current Role in Organization



As shown in Figures 2 and 3, other than Community Living Chatham-Kent which didn't have participants who had served in their role at their current organization for less than a year, participants of the training in all other five agencies had served in their role at their current organization from less than a year to more than 10 years. A majority of participants had served in their current role for over 10 years showing historical ties to their organization and to some extent experience supporting persons with disabilities.

Figure 4: Description of Work Setting



Other than Community Living St. Marys & Area with the majority (over 50%) of its participants indicating that they were in a one-on-one support setting for people who have an intellectual disability, most (over 45%) participants in the four agencies (Community Living Chatham-Kent, Community Living Kingston & District, Ongwanada and Community Living Stratford & Area) identified with work settings higher or lower than a one-on-one support for people who have an intellectual disability. Community Living Prince Edward on the other hand had only a small amount of participants (less than 25%) who identified with work settings higher or lower than a one-on-one support setting and over 35% of their participants were in a one-on-one support setting or a work setting where they didn't directly support people who have an intellectual disability. Higher than a one-on-one setting included a two-to-one staff to person supported ratio (two support professionals to one individual with a disability) while in most lower than one-on-one cases noted, there were one-to-six staff to person supported ratio (one support professional to six individuals with a disability, or groups). Given that all six agencies had at least one management staff (i.e. supervisor, manager or director) participate in the survey, some participants identified with a work setting in which they didn't directly support people who have intellectual disability.

Figure 5: Number of People with an Intellectual Disability Supported

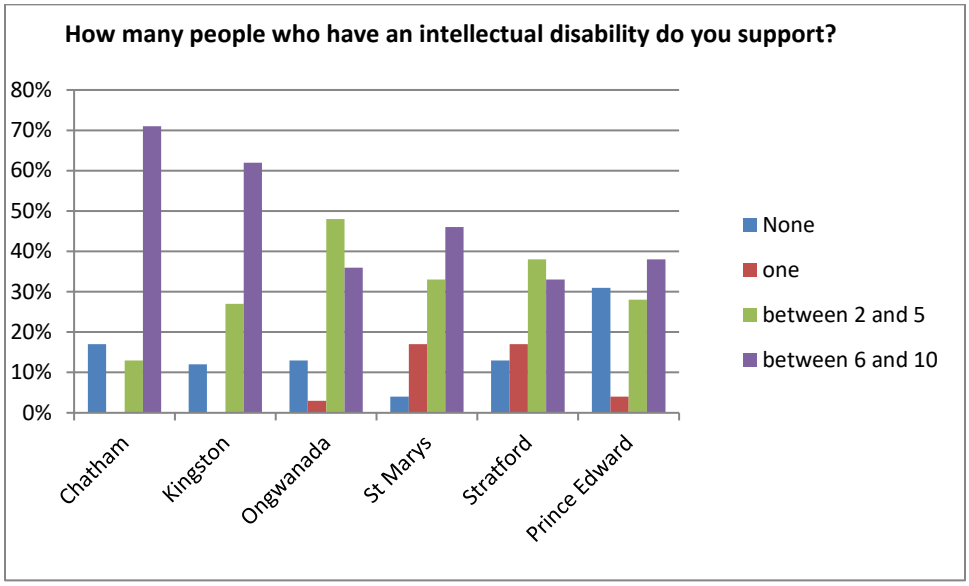
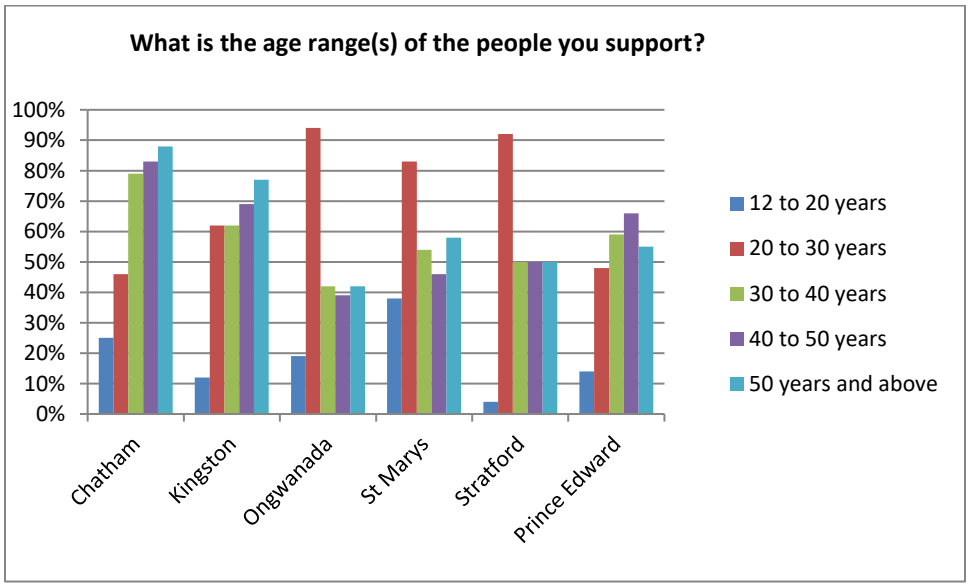


Figure 5 further breaks down the working relationships described in Figure 4. As the chart illustrates, most participants supported between 6 and 10 individuals with an intellectual disability followed by the support of between two and five individuals with an intellectual disability. Less than 20% of participants in each agency indicated that they did not support any individual with intellectual disability. However, in Community Living Prince Edward over 30% of its participants reported that they did not support any individual with intellectual disability.

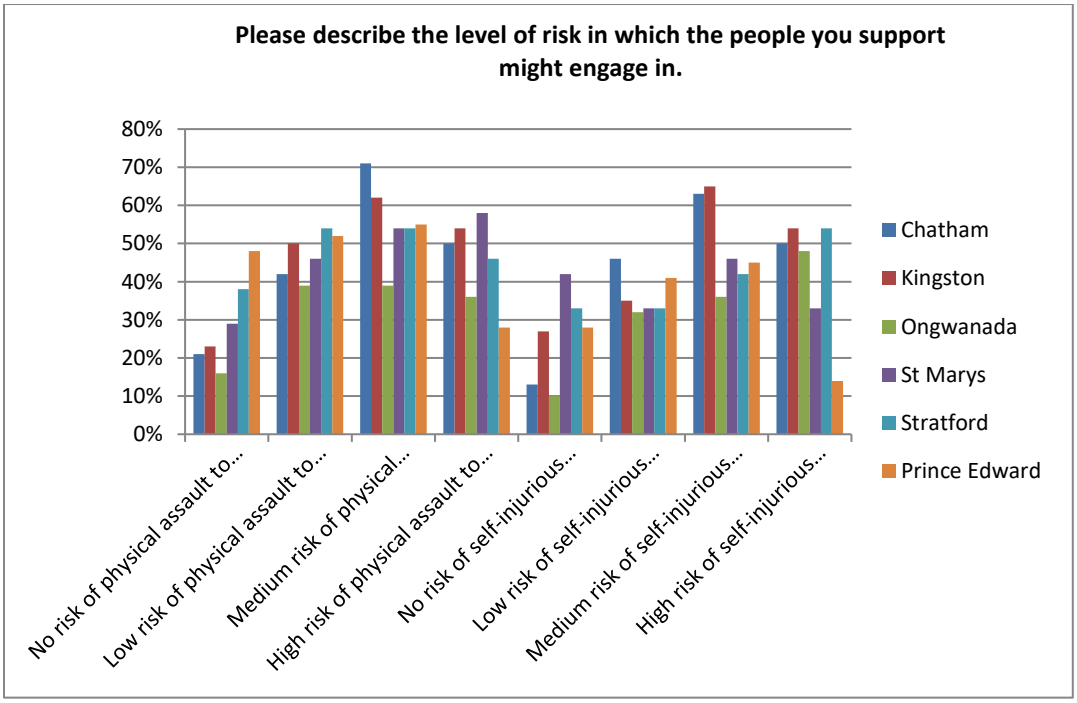
Figure 6: Age Range of Individuals with an Intellectual Disability Supported



In three agencies (Ongwanada, Community Living St. Marys & Area and Community Living Stratford & Area), majority (over 80%) of the participants supported people who were between 20 to 30 years while at Community Living Chatham-Kent and Community Living Kingston & District most (over 75%) of the participants supported people who were 50 years and above. Overall, in all six agencies, participants

supported people who were between 12 to 20 years and 50 and above. However, over 50% of participants from Community Living Prince Edward supported people who were 30 years and above with less than 20% in the 12 to 20 age range. This shows the maturity in age of the people being supported across the six agencies but does not necessarily determine a correlational level of support (i.e. the greater the maturity in age does not necessarily mean a lessened level of support.)

Figure 7: Level of Risk in Which Individuals with an Intellectual Disability Might Engage



As shown in Figure 7, participants in all six agencies noted that individuals with intellectual disability engaged in a range of risks from no-risk to high-risk of both physical assault to supporters and of self-injurious behaviour. High-risk of self-injurious behaviour was reported for the most part by participants from Community Living Stratford & Area, closely followed by Community Living Kingston & District, then Community Living Chatham-Kent, Ongwanada, Community Living St. Marys & Area reported by less than 25% and Community Living Prince Edward reported by only 14%.

Interestingly, high risk of physical assault to supporters was highly reported by participants from Community Living St. Marys & Area (over 55%), followed by participants from Community Living Kingston & District, Community Living Chatham-Kent, Community Living Stratford & Area, Ongwanada and Community Living Prince Edward respectively. From Community Living Chatham-Kent came the highest responses (over 70%) related to medium-risk of assault to supporters. As relates to physical assault to supporters, over half of the respondents from Community Living Stratford & Area and Community Living Prince Edward identified with people who engaged in low-risk; over half of the respondents from Community Living Chatham-Kent, Community Living Kingston & District, Community Living St. Marys & Area, Community Living Stratford & Area and Community Living Prince Edward with medium-risk; and over half of the respondents from Community Living St. Marys & Area and Community Living Kingston & District with high risk of physical assault to supporters. With respect to self-injurious behaviour on the other hand, over half the participants from Community Living Kingston & District and Community Living Chatham-Kent reported medium risk while over half of participants from Community Living Stratford & Area and Community Living Kingston & District reported high risks.

Participants from Community Living Kingston & District seemed to be at more risk as they were the only participants who were exposed to both medium and high risks of physical assault and the people they support engaged in both medium to high risks of self-injurious behaviours.

Part B. Survey Results of Participants Knowledge, Skills and Practices Before and After CCS Training

Preliminary Analysis

To investigate whether reliable scale scores can be computed for sections of the questionnaire, the internal consistency indices (Cronbach's alpha) were computed for each set of questions. The values of Cronbach's alpha greater or equal to .70 indicate reliable scales. The results of these analyses, presented in Table 2, suggest that reliable total scores can be computed for most sections of the survey.

The section on assault and vulnerability (questions 13 to 16 in pre-training survey and questions 10 to 14 in post-training survey) could not be analyzed for Community Living Chatham-Kent, Community Living Stratford & Area, Ongwanada and Community Living St. Marys & Area samples, as these questions had errors in the survey design in SurveyMonkey for post-training survey and as such, the data could not be extracted. Therefore, these questions were analyzed only from the Community Living Kingston & District and Community Living Prince Edward samples.

Table 2. Internal Consistency Index for Sections of the Survey

Survey	Section	Question	Number of items	Cronbach's alpha
Pre	Agitation, anger and aggression	8	8	.83
	Best practices	9	10	.91
	Confidence	12	8	.91
	Verbal and behavioural	18	5	.88
	Behaviour Support Plan	20	11	.96
Post	Agitation, anger and aggression (retrospective pre-training)	2	8	.87
	Agitation, anger and aggression	3	8	.85
	Best practices (retrospective pre-training)	4	10	.90
	Best practices	5	10	.94
	Confidence (retrospective pre-training)	8	8	.93
	Confidence	9	8	.90
	Verbal and behavioural (retrospective pre-training)	17	5	.97
	Verbal and behavioural	18	5	.99
	Behaviour Support Plan	20	11	.98
	Improvement	21	9	.93
	Abilities (retrospective pre-training)	22	10	.98
	Abilities	23	10	.99

The total scores for each scale were computed by taking an average across all items in the scale. The distributions of total scores were examined and found to be skewed for most scale scores. Therefore, main analyses were performed with bootstrapping to produce robust estimates that are not sensitive to the violation of the normality assumption. All analyses were performed with SPSS software.

Main analyses:

To investigate whether the average scores on the scales computed in the preliminary analyses have changed as a result of the CCS training, a series of one-sample t-tests were conducted. The means of the scale scores from the pre-training questionnaire were used as reference points in one-sample t-tests. The descriptive statistics for each scale, as well as the results of the t-tests for each of the six agencies are presented in Table 3.

As can be seen from Table 3, the scores on the agitation, anger and aggression scale significantly increased after the training across five agencies (except Community Living Chatham-Kent), indicating that the respondents felt more confident and able to support the needs of the people they support related to these emotional states. Similarly, in all six locations the respondents indicated that after the training they were more able to implement best practices to support the special needs of people they served. The confidence level and the verbal and behavioural scale scores of the training participants significantly increased as a result of the training in five agencies (except Community Living Kingston & District). However, their agreement with the statements related to the Behaviour Support Plan did not change significantly in any of the six agencies.

Overall, across the six locations, though, the scores on all five scales reported in Table 3, have increased significantly. However, the increase in the Behaviour Support Plan scores was marginal.

Table 3. Scale Scores Before and After the CCS Training

	Scale	**N**	**Pre**		**Post**		**T**	**p-value**
			Mean	***SD***	***Mean***	***SD***		
Kingston	Agitation, anger and aggression		3.23	0.32	3.50	0.37	2.64	.032
	Best practices		2.27	0.37	2.77	0.55	3.27	.039
	Confidence		3.43	0.68	3.91	0.77	2.25	.060
	Verbal and behavioural		2.73	0.51	3.09	0.67	1.80	.112
	Behaviour Support Plan		2.23	0.55	2.72	0.69	2.47	.052
Ongwanada	Agitation, anger and aggression		3.10	0.46	3.41	0.43	2.45	.032
	Best practices		2.35	0.49	3.04	0.50	4.80	.001
	Confidence		3.57	0.67	4.17	0.62	3.37	.013
	Verbal and behavioural		2.82	0.40	3.33	0.54	3.28	.029

	Scale	N	Pre		Post		T	p-value
			Mean	*SD*	*Mean*	*SD*		
	Behaviour Support Plan		2.37	0.54	2.68	0.68	1.57	.155
St. Marys	Agitation, anger and aggression		2.94	0.48	3.45	0.41	5.43	.002
	Best practices		2.13	0.70	3.04	0.65	6.07	.001
	Confidence		3.06	0.78	4.33	0.54	10.18	.001
	Verbal and behavioural		2.63	0.47	3.56	0.49	8.21	.002
	Behaviour Support Plan		2.10	0.80	2.56	0.90	2.24	.054
Stratford	Agitation, anger and aggression		3.15	0.33	3.62	0.25	7.97	.001
	Best practices		2.64	0.67	3.22	0.50	4.76	.001
	Confidence		3.51	0.84	4.13	0.46	5.52	.002
	Verbal and behavioural		2.87	0.73	3.40	.48	3.96	.008
	Behaviour Support Plan		2.68	0.83	2.49	0.66	-1.11	.275
Prince Edward	Agitation, anger and aggression		2.93	0.71	3.38	0.50	4.44	.001
	Best practices		2.32	0.75	3.16	0.64	5.57	.002
	Confidence		3.09	1.06	3.99	0.97	3.95	.001
	Verbal and behavioural		2.17	0.88	4.17	1.15	7.36	.001

	Scale	N	Pre		Post		T	p-value
			Mean	***SD***	***Mean***	***SD***		
	Behaviour Support Plan		2.00	0.95	2.12	1.27	0.42	.679
Chatham-Kent	Agitation, anger and aggression		3.23	0.38	3.40	0.49	1.77	.129
	Best practices		2.39	0.40	3.03	0.79	3.68	.005
	Confidence		3.64	0.64	4.30	0.72	4.19	.003
	Verbal and behavioural		2.99	0.67	4.38	1.13	5.65	.002
	Behaviour Support Plan		2.86	0.71	2.69	0.90	-0.81	.446
All locations	Agitation, anger and aggression		3.06	0.51	3.45	0.43	9.59	.001
	Best practices		2.29	0.60	3.05	0.63	12.12	.001
	Confidence		3.40	0.80	4.16	0.70	10.76	.001
	Verbal and behavioural		2.57	0.78	4.18	0.91	17.57	.001
	Behaviour Support Plan		2.34	0.76	2.53	0.91	2.03	.047

In the post-training survey, the respondents were asked questions retrospectively about their pre-training perceptions and also about their post-training perceptions. These scores were compared using the paired-samples t-tests. The results are presented in Table 4. As can be seen from this table, the participants' ratings were significantly higher for agitation, anger and aggression, best practices, confidence and abilities scales within each of the six locations and for the entire sample. The average scores for the verbal and behavioural scale have increased significantly within four of the six locations (except Community Living Kingston & District and Community Living Chatham-Kent) and across the six locations together. Again, this indicates that the respondents felt more confident and able to support the needs of the people they support related to these emotional states and that after the training, respondents were more able to implement best practices to support the special needs of people they served.

Table 4. Scale Scores Before and After the CCS Training

	Scale	**Post (retrospective about pre-training)**		**Post**		***T***	***p*-value**
		Mean	***SD***	***Mean***	***SD***		
Kingston	Agitation, anger and aggression	2.94	0.32	3.46	0.38	-6.15	.001
	Best practices	1.89	.39	2.69	0.56	-5.30	.001
	Confidence	3.19	0.46	3.90	0.78	-3.34	.012
	Verbal and behavioural	2.95	0.37	3.10	0.67	-0.71	.481
	Abilities	3.41	0.76	3.97	0.53	-3.05	.034
Ongwanada	Agitation, anger and aggression	2.85	0.50	3.40	0.43	-5.10	.004
	Best practices	2.00	0.54	3.03	0.50	-7.80	.001
	Confidence	3.27	0.73	4.17	0.62	-5.28	.001
	Verbal and behavioural	2.75	0.68	3.33	0.54	-4.29	.004
	Abilities	3.67	0.82	4.29	0.59	-3.12	.022
St. Marys	Agitation, anger and aggression	2.78	0.49	3.45	0.41	-5.83	.001
	Best practices	2.01	0.45	3.04	0.65	-7.97	.001
	Confidence	3.03	0.83	4.32	0.54	-8.08	.001
	Verbal and behavioural	2.71	0.65	3.56	0.49	-5.32	.001
	Abilities	3.00	0.79	4.24	0.78	-6.05	.001
Stratford	Agitation, anger and aggression	2.91	0.42	3.64	0.25	-7.20	.001
	Best practices	2.27	0.49	3.26	0.50	-7.69	.001

	Scale	Post (retrospective about pre-training)		Post		*T*	*p*-value
		Mean	***SD***	***Mean***	***SD***		
	Confidence	3.20	0.60	4.13	0.48	-7.32	.001
	Verbal and behavioural	2.86	0.55	3.42	0.48	-5.27	.003
	Abilities	3.62	0.79	4.29	0.50	-5.82	.001
Prince Edward	Agitation, anger and aggression	2.58	0.70	3.45	0.51	-4.79	.001
	Best practices	1.81	0.51	3.16	0.64	-7.08	.001
	Confidence	2.84	1.25	3.99	0.97	-5.03	.001
	Verbal and behavioural	2.28	1.22	2.84	1.37	-3.35	.013
	Abilities	2.58	1.36	3.58	1.43	-3.93	.005
Chatham-Kent	Agitation, anger and aggression	2.68	0.53	3.36	0.48	-6.85	.001
	Best practices	1.81	0.53	3.01	0.81	-9.03	.001
	Confidence	3.21	0.74	4.27	0.73	-7.77	.001
	Verbal and behavioural	2.66	0.75	3.15	1.16	-2.27	.096
	Abilities	3.42	0.95	4.11	1.13	-5.02	.001
All locations	Agitation, anger and aggression	2.77	0.52	3.46	0.43	-13.30	.001
	Best practices	1.96	0.51	3.05	0.64	-17.63	.001
	Confidence	3.11	0.83	4.15	0.71	-14.41	.001
	Verbal and behavioural	2.68	0.79	3.24	0.91	-7.68	.001
	Abilities	3.24	1.01	4.07	0.96	-10.3	.001

Finally, responses in four areas related to feeling vulnerable and being satisfied with physical safety and emotional well-being were compared using the paired-samples t-test. The results of these analyses varied across the six locations as shown on Table 5.

The participants from Community Living Kingston & District had significantly higher satisfaction with their physical safety and emotional well-being after the training, but their average scores on the other two items had not changed compared to the pre-training scores. The participants from Ongwanada had higher satisfaction only with their sense of physical safety after the training, while the participants from Community Living Stratford & Area reported only better emotional well-being after the training. For the participants from Community Living St. Marys & Area, significant changes were observed for all four items: they felt less vulnerable both physically and emotionally, and felt better physical safety and emotional well-being. The participants from Community Living Chatham-Kent felt less physically vulnerable, but the rest of the scores did not change in this sample. The participants from Community Living Prince Edward felt physically and emotionally vulnerable with a significant improvement in their emotional wellbeing.

On average across all six locations, though, the scores on all four scales have changed significantly. Specifically, the participants felt less physically and emotionally vulnerable and their physical safety and emotional wellbeing improved.

Table 5. Item Scores Before and After the CCS Training

	Item	**Pre**		**Post**		**T**	**p-value**
		Mean	***SD***	***Mean***	***SD***		
Kingston	Feeling physically vulnerable	3.14	1.13	2.77	1.42	-0.94	.366
	Feeling emotionally vulnerable	2.95	1.17	2.62	1.26	-0.96	.358
	Satisfaction with physical safety	3.50	1.01	4.18	0.75	3.01	.013
	Emotional wellbeing	3.32	0.95	4.09	0.83	3.08	.022
Ongwanada	Feeling physically vulnerable	2.43	0.66	2.50	1.00	0.24	.843
	Feeling emotionally vulnerable	2.35	0.83	2.55	0.69	0.94	.349
	Satisfaction with physical safety	3.43	0.95	4.08	0.67	3.39	.009
	Emotional wellbeing	3.43	1.20	3.83	1.12	1.25	.236
St. Marys	Feeling physically vulnerable	3.16	1.17	2.32	1.11	-3.32	.014
	Feeling emotionally vulnerable	3.11	0.94	2.56	0.98	-2.39	.037
	Satisfaction with physical safety	3.16	1.21	3.95	0.97	3.58	.002

	Item	Pre		Post		T	p-value
		Mean	***SD***	***Mean***	***SD***		
	Emotional wellbeing	3.05	1.18	4.11	0.81	5.68	.001
Stratford	Feeling physically vulnerable	2.55	0.86	2.24	0.90	-1.44	.219
	Feeling emotionally vulnerable	2.55	0.91	2.35	0.70	-1.16	.264
	Satisfaction with physical safety	4.23	0.61	4.35	0.61	0.84	.425
	Emotional wellbeing	3.64	0.58	4.29	0.47	5.74	.001
Prince Edward	Feeling physically vulnerable	2.63	1.31	1.93	0.62	-4.26	.001
	Feeling emotionally vulnerable	2.83	1.24	2.31	0.86	-2.20	.044
	Satisfaction with physical safety	3.38	1.10	4.17	1.15	0.79	.073
	Emotional wellbeing	2.88	1.04	4.17	1.20	4.55	.008
Chatham-Kent	Feeling physically vulnerable	2.67	0.77	1.95	0.74	-4.44	.001
	Feeling emotionally vulnerable	2.50	0.71	2.10	0.89	-2.09	.050
	Satisfaction with physical safety	3.83	0.62	4.43	1.12	2.45	.143
	Emotional wellbeing	3.61	0.98	4.33	1.16	2.87	.057
All locations	Feeling physically vulnerable	2.75	1.04	2.25	1.00	-4.93	.001
	Feeling emotionally vulnerable	2.71	1.01	2.39	0.91	-3.43	.004
	Satisfaction with physical safety	3.59	0.99	4.20	0.93	6.54	.001
	Emotional wellbeing	3.31	1.03	4.16	0.96	8.80	.001

These survey results have shown significant positive changes in participants' knowledge and skills as a result of the CCS program. These significant changes have overall positive implications for supporters in preventing and de-escalating challenging behaviours in the individuals they support who have an intellectual disability in all six agencies.

Questions about the frequency of verbal and physical abuse before and after the training could be addressed only with the Community Living Kingston & District and Community Living Prince Edward samples as the error in the survey design did not allow for collection of the data for these questions across the other four locations. However, only 22 respondents had valid responses to the questions about physical abuse and only 18 respondents had valid data for physical abuse across these two locations. Therefore, significance testing could not be performed to investigate whether the frequency of verbal and physical abuse has changed after the training. However, descriptively, it can be seen that for majority of respondents (19/22) the frequency of verbal abuse did not change. Similarly, for 67% of respondents the frequency of physical abuse did not change, but it had reduced for the other 33%. With the constraint from the design of the questions pertaining to verbal and physical assault scales in the other four locations, these results would probably have been different if an analysis was done on all six agencies.
Fortunately, the more in-depth data from focused group interviews shed more light on the positive accounts of reduction in challenging behaviour from majority of the respondents in all six agencies (see details in Section C).

Part C. Findings and Discussion by Research Questions, Conclusions and Recommendations

This section of the report combines the key findings from the survey results together with key evidence from focus group interviews and statements from participants' written description of their professional and personal learning outcomes. These statements are representative of comments from participants who participated in the demonstration project.

Three (RQ1, RQ2, and RQ4) of the following four research questions guiding this study are answered in this section of the report.

Research Questions (RQ):

1. Is there a decrease in the amount of physical expressions of agitation, anger and aggression (AAA) or other concerns because of CCS interventions?
2. Is there an increase in quality of life because of CCS interventions?
3. Is there decrease in the amount of days off of work/recovery time for staff because of Conscious Care and Support Interventions?[2]
4. Is there an increase in job satisfaction, job performance, safety, perceived emotional security and overall quality of life because of CCS interventions?

Research Question 1: Is there a decrease in the amount of physical expressions of agitation, anger and aggression (AAA) or other concerns because of CCS interventions?

Evidence from the surveys and focus groups show that there is a decrease in the amount of physical expressions of agitation, anger and aggression as a result of CCS interventions. The scores on the agitation, anger and aggression scales of the survey significantly increased after the training across five agencies (except Community Living Chatham-Kent), indicating that the respondents felt more confident and able to support the needs of the people they support in order to decrease agitation, anger and aggression. In support of this evidence, five agencies (except Community Living Chatham-Kent) in the focus groups indicated a decrease in actual assaults for the people they support.

[2] This variable of investigation was omitted at this stage as the length and structure of the demonstration project could not accurately assess this evaluation.

Participants of the survey were more aware and able to identify the special support needs of the people they support that contributed to their anger, agitation and aggression. In accordance, participants in one agency noted the decrease in AAA as follows:

> *"I previously did [name] and his home when I was first hired with the agency and we had had our fair share of physical aggressive incidents and I actually spent some time with [name], I think it was last week. I was going back to what [name] was saying, just being more mindful I didn't feel myself getting anxious around him and in that situation. And he was pretty agitated, there was a few of us in his house. He had been engaging in some head banging behaviour so he was a little more escalated in that situation but just practicing the mindfulness through that kind of time, I would say for me being the biggest thing because I don't do a lot of direct support. But when I do I try to be more mindful of those things."*

A second participant in the same agency added:

> *"I was gonna say some thoughts from reading physical aggression reports show it's [actual assaults] stabilized or have decreased a little bit but there seems to be a big spike in self-injurious behaviour with the head banging and more now. And that's just from what I see, I don't know."*

A third participant in the same agency noted:

> *"I find that I actually got hit physically less. Personally, I used to get hit a lot. And I don't think I've been hit, maybe once or twice since the training. And normally it'll have been at least once, twice a week or a few times."*

Other participants in the same agency went further to explain the CCS interventions implemented to address the triggers associated with the expression of physical assault:

> *"We've seen a decrease… I would like to think the environmental things we've implemented. So I would say the noise cancelling headphones, I would say for sure those have benefitted him."*

> *"I think limiting the [time of] electronics on with his anxiety has definitely decreased. He's not as before."*

One participant clearly associated the decrease in assault to the knowledge supporters garnered from CCS training:

> *"But for [name] I would say she is decreased in that because of our training with Conscious Care"*

In a second agency participants described how the persons supported expressed physical AAA prior to CCS training and the changes that occurred after CCS training following CCS intervention:

> *"I was the only person on [name]'s team who went through the CCS training and when we started this he was just moving out. And in the beginning we had a lot of… he would pull you, take your wrists and drag you to the door because he wants to go out. Or if he knows that if he gets his fingers like if he gets his nails in your hand, you're getting up because that hurts. And that was happening nightly multiple times a night. And it is I'm sure a lot of things it could be because there's more stuff to do at his house and he's more comfortable as well but we've seen those numbers decrease on his team I would say."*

> *"He's [name] is much different in intensity. He'll hold off from targeting people but he'll pick some person and just attack them to like going to…Last summer was much worse than this summer. And I'd say the time has decreased because he would go like from what seemed like for hours (eight hours) and now it's only ten minutes."*

"With us they've definitely decreased until this medical issue came up. It was the doctors, dentists and expert technicians that failed in their communication. But up until that, there was a major decrease… I think the diet getting her sugar levels under control accounts for that."

In yet another agency, participants showed how CCS training is indirectly benefiting other people with challenging behaviour who were not involved in the study by recognizing triggers and addressing them in order to decrease their expression of physical AAA:

"Yeah, we have another individual who's on [name of support location] who has greatly benefited indirectly from the staff having this training because they have started to recognize his triggers more and are giving him what he needs to be able to reduce his anxiety. So for him, even though he wasn't included in the project, he has not had any incidences."

"You're able to see her triggers… Just to add on to that, [name] you're right. I think people are recognizing now whereas before things would have blown up. I think there's been quite a few incidences with [name] that things could have escalated but the team's mindfulness has helped keep it here. As well as their ability to recognize her triggers has helped it to not escalate. So I would say yes there has been a decrease [in assault]."

Another participant in the same agency further described changes in actual numbers of assaults:

"Maybe fifty-five or something like it in a month…five to ten in a week. She was really struggling, she was struggling a lot. So I would say yeah within a month it would be between five and ten times and so that's what we're seeing over the last two months. I think maybe there was one time in those two months."

The team of supporters supporting a primary individual with medium to high risk concurred and associated the changes directly to CCS:

"She hasn't assaulted herself. I don't know if it's based on familiarity of staff is not changing all the time… The threats aren't there. They haven't been there for the last I would say since significantly since Conscious Care she hasn't threatened in that way at all."

Participants in another agency associated the change in behaviour to an increase in their confidence to identify and address the needs of the people they support:

"Well the incident reports have decreased so…They would be considered assault in the years but when he was screaming. So they've drastically decreased…Yes decreased…Maybe it comes back to the self-confidence because there's a couple of people here he had up against the wall and was very frustrated and strong and pulling them down the hall and bruising. So maybe it comes down to the confidence and just knowing what he wants and offering him."

Aligning with the evidence from participants in the agency which showed changes in duration of incidents of assault, team members of a primary individual in another agency expatiated on such changes as follows:

"Well [name] typically engages in a lot of self-injurious behaviour. When he first came that involved him throwing himself on the floor, hitting himself in head and his body, biting himself really bad and he was bleeding. We've noticed that although the amount of incidents haven't decreased hugely the duration of them have decreased quite a bit and the intensity have decreased quite a bit. So now if he bites he very rarely breaks his skin. He's not jumping to the floor hardly at all and his incidences turn to be more like here [reference location], where before it'll be like all over the place."

"And we hypothesized that it was pain triggered. And because the pain has been managed we think that that has helped a great deal. So now I think the self-injuries are more of frustrations and pissed off."

The survey evidence also portrayed that when participants became emotionally hi-jacked they were aware of the psychological triggers that contributed to that mood and the time when their mood, body sensations and thoughts were changing. This was supported by data from focus groups with one participant saying:

"Yes, yes [feeling physically and emotionally safe] because I think we're better equipped to read his triggers and read his…Intervene in earlier stages of his escalation. We notice more…We're catching things much quicker and we're also listening to him. Because before it was like yes ok fine but… and pushing him to the point where he was creating like he was going "come on" you guys. When you are non-verbal you can't say that. So yeah I but…we have to still remind ourselves that we always have to be safe right? That's that fine line right? 'Cause you can get too comfortable and I tend to do that sometimes and I don't mean to but I have to catch myself. And [my co-worker] helps me. And no it's good. It's a good team."

The evidence from surveys also indicated that supporters felt authentically kind and caring and respectful regardless of who they were supporting and regardless of their behaviour at the time. This evidence is corroborated by comments from participants in the focus groups.

The following participants in one agency noted:

"I think for me like another thing that is significant is like learning about post-traumatic stress and trauma especially with the woman that we provide support to because she has had some traumatic events that happened. Once we kind of started talking to the family a little bit more. So understanding and recognizing the triggers signs the symptoms of post-traumatic stress and how to help her throughout that in her everyday living…because she is non-verbal. Sometimes she wakes up and she is just very angry right off the bat so being compassionate showing her you're there, empathic you know that kind of stuff I thought was very useful."

"Just the compassionate approach…letting them know that you're here to listen to them whether they want to talk, cry, you're just there to help them through whatever it is they need. I think it's helped me with a relationship with a lady and like we have a really good report as well as you know like um I just think they're is a more personal connection sometimes now that we are really looking in depth and trying to get to the bottom of a lot of things, help."

In a different agency a participant described how the training caused them to be more understanding and compassionate:

"I think the difference that the training has made to the people that we support is it's helped us as support workers to be more understanding. To be more thoughtful and realize that people don't choose to have difficult days or difficult moments that there's something else going on. So it's helped us to be more understanding and compassionate and to think about how that person must feel."

Another participant from a team in the same agency supporting a medium to high risk individual described an incident where they were able to de-escalate challenging behaviour by being caring and having a conversation with the person supported:

"One morning, there was anxiety that was increasing and increasing and very quickly increasing quicker than I could actually get there. So once I was able to help her sitting down and eating breakfast so just give her a few minutes here to calm down a bit because she's eating. And then I went in and just sat with her and talked to her she's looking at me and I said I understand that this

is what I heard you saying. Why is it so upsetting to you? Why is it causing you so much anxiety? Talk to me. Tell me why. She looked at me like I was out of space. I said no come on talk to me, I said tell me. I said was sitting with her I was really open and she "haa" and started talking and told me what was going on, why she was having this anxiety, why it was upsetting her. I offered a suggestion on how to help and she said yes. I said okay I would go and do that for you right now I'll be right back. And as I walked away, she said thank you for listening right. I've always taken that as she saying her thank you for listening, right? That's not what she means she stands there looking at me she means thank you for listening to me. And I said you're very welcome and I will always listen to you and she just "haa." Like this and I went and did what I said I would do. I came back with all the information she was looking for and our day was wonderful for the rest of the day which normally, that would have turned very bad really quickly into the banging, the hitting, everything and not really knowing why."

As the evidence has shown, participants in this study were aware of their psychological triggers that contributed to their mood change when they felt emotionally hi-jacked. Additionally, they were aware and able to identify special support needs of the people they support that contributed to their agitation, anger and aggression. Finally CCS interventions were shown to decrease such expressions of physical agitation, anger and aggression.

Research Question 2: Is there an increase in quality of life because of CCS interventions?

Based on data from focus groups, yes there is an increase in quality of life of people supported due to CCS interventions. CCS provides strategies and techniques to support the improvement of quality of life for persons with challenging behaviour. A good number of participants identified overall improvement in the quality of life of most of the persons supported in majority of the agencies. The following observable changes in people with challenging behaviours were identified in the focus groups:

a) communicating better and clearer;
b) interacting more with supporters (staff) and people (e.g. strangers in one case) within the community;
c) overall improvement in quality of health (related to changes in nutrition and exercise);
d) sleeping better;
e) walking (going out for walks);
f) being calm, focused and happy; and
g) opening eyes (the case of one person supported) as opposed to walking with closed eyes in the past and bumping unintentionally into staff.

Three of these observable changes in behaviour (illustrating improvement in quality of life for persons supported) with data collected across multiple agencies involved in this study will be discussed further.

a) Communicating Better and Clearer:

One of the participants noted how CCS enabled a medium to high risk individual to communicate better and clearer:

"And so for me it's been really cool. And what I've noticed is I used to ask a lot of questions if he didn't respond I would just continue to ask him questions but then when I give him time to process I found that [name] would respond so in the mornings I'll ask [name] a question. [name] what kind of pants do you want? This time he was sitting on his bed reading his book. Before I would have continually asked him to answer me but three minutes later [name] puts the book down and then grabs two different pair of pants and then makes that decision. And then I realized that he was still processing that but he just needed time. Right now I have my book and then he puts the book

down then he went to the pants. This was a couple of weeks after the course [CCS training] and I was shocked like what you actually heard my question. You just needed the time to process it. So I have found that [name] is communicating lot more clearer and I find less confusion".

A second participant from the same agency added:

"It's also nice to see that we can actually, I see that he communicates better in a way. In my personal experience with him is that he used to always…I couldn't understand him but now I feel that he's actually a little bit better. Yeah, I agree. It's almost like he is more alert. Where before I always felt like I couldn't really understand him."

The reason associated with this change in behaviour as explained by other team members supporting the same medium to high risk individual supported was:

"Us being more calm as well has improved their quality of life because they're not getting as anxious as they were before so it's kind've like were rubbing off on them…Increase in their quality of life…The people have more control over their lives because we're not trying to set it we're trying to understand what they want and put things in place that we see that their wishes are being met."

Other participants in another agency supporting individuals with challenging behaviour corroborated this and went further to explain how those supported were feeding into their confidence hence building the confidence of persons supported:

"I find the individual she's speaking more, she's talking more, she's answering questions more, more social. Asking when you can see the anxiety building and sitting down and say ok tell me about this… I think it's made her more confident in verbalizing like she now has the confidence to as opposed to the banging or the threatening behaviour or the threatening words. So she can sort of see a difference and we don't say to her we're implementing this strategy here's what you do and this is how we're doing it and how do you feel about it? But she recognizes that change and again you can see the change in her and how she's building up her confidence off of our confidence."

As seen in the quote below, supporters took it a level higher to actually engage in teaching people who were non-verbal how to use sign language to improve on their communication, thereby, decreasing anxiety associated with the inability to express themselves:

"*We've been working with [name] to teach him some new sign language some new ways to communicate so he doesn't have to bite he doesn't have to always say: "break" but he's got a new toolbox to use to be able to tell us how he's feeling. And I think even the you know we were doing a very BSP driven way of doing it where we would say he'd have to do it 10 times or say if it were a chip, he'd have to sign chip and we'd give him a chip where even that we're starting to look at that a little bit differently that he's maybe learning better in a natural way. So we're teaching him emotions instead of making him sign them. I'm happy…oh [name], I'm happy today then you sign happy in the moment. So he's learning how to use it as he would need to not sitting across the table. I mean I'm not saying but I think just we've grown to understand that [name] learns in a different way as well and he is very smart. He's not a child so doing some of these things I think we've taken a different look at and a different approach that we need to just be more spontaneous and we need to be more in the moment and more natural in the way we're teaching him these things."*

Participants in two different agencies identified the ability of people with challenging behaviour to communicate as follows:

> *"Well he does communicate more for example today like [supporter name] right away, she recognized that he was struggling in the room he was in so [supporter name] like brought him to a different room and he ended up having break in my room and he was content. He didn't swear, he had two bottles of water…well one and a half and then but I mean he had a great break there was no profanity. He was interacting with the other people…a lady came up and rubbed his head and that you know he liked it and then it was fine. But he is communicating better, yes he still has his outbursts but he's communicating better."*

> *"I find the individual she's speaking more, she's talking more, she's answering questions more, more social. Asking when you can see the anxiety building and sitting down and say ok tell me about this… I think it's made her more confident in verbalizing like she now has the confidence to as opposed to the banging or the threatening behaviour or the threatening words. So she can sort of see a difference and we don't say to her we're implementing this strategy here's what you do and this is how we're doing it and how do you feel about it? But she recognizes that change and again you can see the change in her and how she's building up her confidence off of our confidence."*

When these individuals with challenging behaviour are communicating better, they can easily convey information to their supporters about their needs which if not known by supporters can be left unaddressed and in most cases lead to anxiety. However, better and clearer communication as seen in these quotes facilitates supporters' work and improves the quality of life of people supported.

b) Socially Interactive:

Based on the knowledge garnered from CCS training, participants were able to help to improve the quality of life of a medium to high risk individual as noted in the following quotes:

> *"With what [name] just said about getting the equipment and stuff by bringing that equipment into his room and him getting to use that he's now also allowing more stuff into his room. He had prior to us doing this training his room was basically a table and a chair like he didn't want anything in his room. He is now allowing cards lite-brights, puzzles, people. People is a big one so that's all been a major improvement on his quality of life."*

Another participant from the same team supporting the same individual with medium to high risk concurred by saying:

> *"I find that the quality of his life has improved, like he's interacting more with social activities… and initiating them…Yea, before he never used to do that…He was somebody that we thought you know this is gonna be the way he's going to be for the rest of his life but then it's like wow he's a different person…Because how many different things did we try with the same end result, until this [CCS] came along."*

Taking it to another level, participants in another agency added that as a result of CCS training [not explicit in quote] another person with medium to high risk supported by their team is going out of her way to interact with others:

> *"I just want to say that I noticed another change because she's opening up and that is her giving. She is far more open to she's talking about inviting people to go to the parade. Wanting to go out for supper with individuals. She's being more social with a wider range of people and that is very good to see. I think the more she gives, the more that it will benefit her. We've been trying to implement her making something to go to she goes out to dinner every week. And she never used to bring anything. So for her to make something from her own time and to take it there is*

very giving and I think that has really opened her up into letting other people into her life and asking for people to go to different places with her to dinner. She even mentioned she wanted [name] to go to the fair with her next year. She's talking more, she's open like that where she wants people into her life into her circle. Even with her food she's wanting to share that a lot more and that's huge. It is huge and I noticed it increasing and increasing."

"We have a Facebook page that one of our co-workers keeps current and the amount of outings and right away mom likes. She's watching and she's seeing exactly how active [name] is in his own community with a variety of people and also [name] has established friendships with peers throughout the agency which is very exciting. Because when he first came we weren't sure. He seemed rather anti-social which isn't the case at all. He's an amazing person and with the right situation and the right people he's extremely happy and extremely social and wants to interact. He loves going to [day support program] and he's established a friendship actually with someone [name of supporter] used to support; [name of friend]. They both love swimming and they [name of friend] is more verbal than [name] but not a whole lot. But they have a connection which they saw each other at the pool this week-end. [Name of friend] was like just thrilled."

c) Overall Improvement in Quality of Health (related to changes in nutrition and exercise):

Focus group data show overall improvement in the quality of health influenced in part by changes in nutrition, visits to experts and introduction of exercise in the routines of people supported with challenging behaviours due to CCS interventions.

With respect to nutrition, participants in the following quotes identified changes in diet which have resulted in better bowel movements:

"He, we went from using a suppository every day to every other day. And prior to the changes in food, we did not see results on the days he did not receive the suppository. Once we like I said we've slowly introduced these things, on two occasions out of a month, he has gone on his own without the suppository. It is an improvement. It's only twice but it is an improvement."

The next participant described concrete evidence of changes in behaviour as a result of changes in nutrition following exposure to expert advice:

"[Name], because of Conscious Care now sees a naturopath and our first couple of visits she had some pretty big concerns, one being some pretty severe sensitivities to foods that we might not have thought about; tomatoes being one of them. Also he needed a liver detox and a few things that were rating pretty high so he was on some stuff for those things and I think I've noticed. I did notice so we went to the naturopath and he had dinner and put ketchup all over it and right after that, he had severe anxiety. So that was before we implemented it and right after we found out that ok I'm seeing this, this is real… I see a difference when he eats them. That's all I can say for sure… I know he hasn't complained or asked to vomit in the toilet like he had been before so that's something that we see that's concrete, which is good."

A participant in another agency connected changes in nutrition to ability to exercise as follows:

"With [name] we cut out a lot of the sugars the cow's milk doing the gluten free, more whole wheat stuff too…"In the beginning it seemed his behaviours were decreased and stuff but and I don't find that he's yelling that he wants bread as much as he was before…"but he has lost the weight, it helps him to do the grounding exercises and so you know it's kind of all related."

Another participant concurred:

"The gastrointestinal. We've taken him to a naturopath. He's on a probiotic now and he's done those. Alot of testing to see what's going on with his gut. [Name] was very clear about how gut health is very high with autistic individuals and that's where a lot of the problems stem from so

we're really focusing on that through his family doctor as well as the naturopath. And he gets out twice a day most days for physical exercise whether it's for a walk or whether we go into groceries or go out and do a fair or a festival which is really huge because there was a stretch there were he wasn't…days on end where he wouldn't go anywhere. Yeah. He wouldn't leave the house…When he first came he wasn't going out at all and it was a struggle to get him out once or twice a week. And now he's going out generally speaking like twice a day so that's a huge change."

The changes in nutrition and ability to exercise resulted in overall improvement in health as seen in a participants' comment below:

"More energy. Not so sluggish. Not eating fast food…We were at the doctor's office and she had never seen [name] have perfect blood sugars and her average three month was 6.2 she was like we've never seen that. So that says a lot about changes…Healthier changes. She just had her medical report so a lot of good changes."

Prior to CCS training, the medium to high risk individuals exhibited challenging behaviours which were seen as impediments to them living better lives. As a result of CCS training, supporters were able to support these individuals to improve their quality of life. If CCS can make such a difference in the lives of most of the medium to high risk individuals, it is possible that with appropriate sharing of information garnered from the training, CCS could make a difference in the lives of all individuals with challenging behaviours in Ontario.

Research Question 4:	**Is there an increase in job satisfaction, job performance, safety, perceived emotional security and overall quality of life because of CCS interventions?**

The evidence from survey and focus groups indicate that there is an increase in job satisfaction, job performance, safety and perceived emotional security because of CCS interventions.

Safety and Perceived Emotional Security:

Evidence from both survey and focus group data indicate an increase in safety and perceived emotional security for supporters who participated in the study.

The participants from Community Living Kingston & District had significantly higher satisfaction with their physical safety and emotional well-being after the training, but their average scores on the other three items had not changed compared to the pre-training scores. Evidence from focus group aligned with survey findings. Participants noted that:

"I previously did [name] and his home when I was first hired with the agency and we had had our fair share of physical aggressive incidents and I actually spent some time with [name], I think it was last week. I was going back to what [name] was saying, just being more mindful I didn't feel myself getting anxious around him and in that situation. And he was pretty agitated, there was a few of us in his house. He had been engaging in some head banging behaviour so he was a little more escalated in that situation but just practicing the mindfulness through that kind of time, I would say for me being the biggest thing 'cause I don't do a lot of direct support. But when I do I try to be more mindful of those things."

"For me, I used to do a lot of mental preparation before I'd go in. I'd spend like twenty minutes in my car praying before I go in because I was usually so anxious and so nervous before I go in 'cause I'm gonna get hit today, I'm gonna get punched and I'm gonna get beat up. And I am being honest, I'd be in my car and I'd be like be calm. Most of the staff used to do that. You'd see them

in their car mentally and if you asked the staff they'd say they spent time mentally preparing themselves to go in. For me, that is something that has totally reduced. I get to a shift and I don't need to spend ten minutes in my car. I can just walk in and just be there and be present whereas after this course [CCS training] I think it's reduced my personal anxiety walking in. I'm less like oh I'm gonna get hit. And with that I actually did get hit a lot. The opening thing and it has to do with my own mindset change."

The Community Living Stratford & Area participants reported only better emotional well-being after the training. However, focus group data showed evidence of a sense of improvement of physical safety as opposed to emotional well-being. On physical safety, one of the participants noted that:

"I think it's helped a lot with preventative stuff. So I feel more safe with I don't think [name] is going to escalate as much as I did before. So I think that he is more in control of himself which has helped me to feel safe…I think he's feeling better physically too. I think he struggled with these headaches and he struggled with his stomach. He was fatigued probably because he felt crappy all the time so I think in us helping him to get to a better place physically I think it's given him some energy back and he just seems lighter. I don't know like he does. He seems happier. ..Yeah I feel a lot more confident with the knowledge I've learned therefore I feel safer."

Another participant from a different agency went further to explain how both support staff and the people they support felt safer due to CCS interventions:

"I think that though we feel safe but I also think that the person that we support also feels safer too. Well I know speaking from my little…we are open with what we're doing and keep him involved with all the steps too. And I think I can feel a little bit more confidence in him too that he's confident and people that are supporting him are there for him and can help him through whatever's going on... Well [name] talked about it earlier too about how people are recognizing better that people are going from 0 to 100 while a lot of times they are sitting at a little more higher level. I think we've got collectively more strategies to implement earlier as preventative and early supports so not looking not waiting till you've really seen things happening the more subtle things the more subtle stuff. We've got more tools now to provide support earlier."

For participants from Community Living St. Marys & Area, significant changes were observed for all four items: they felt less vulnerable both physically and emotionally, and felt better physical safety and emotional well-being. This evidence aligned well with evidence from focus groups.

On emotional well-being, one participant noted that:

"I think for emotional well-being you're able to separate what's happening isn't because of me, isn't directed at me it's just happening because something else is happening most of the time. So you don't feel upset or frustrated that oh they don't like me or something like that because there's other factors that are playing into somebody's outburst or their frustration."

A second participant added a change in their way of thinking which has helped in improving their emotional well-being:

"Sometimes I think I've changed the way that I think about it because sometimes people have high agitation or anxious or whatever. So if you walk in thinking oh my gosh they might bite me. I've changed the way that I think about that you know like hey how is it going? Because they tell you about the importance of touch, stimulating the cerebellum and all of that stuff. So you try that first if things are rocky you go sit somewhere else. But you've got to walk in with the approach that everything's gonna be ok. And I think I've tried to change the way that I to do it like that. And I think that's helped to reduce my stress anyway."

On physical safety, one of the participants indicated that:

> *"I personally feel safer walking with [name] like the one day I told her. She likes to hold your hand sometimes when she goes for a walk so I told her no I'm not holding your hand. The last time I held your hand you attacked me. Normally that wouldn't go well but she was like: "alright." I just feel like, I don't know safer."*

The participants from Ongwanada had higher satisfaction only with their sense of physical safety after the training. This was strongly corroborated with evidence from focus groups.

One participant simply noted:

> *"I feel safe working with him."*

Another participant added:

> *"It wasn't like he was aggressive but to him he was a big guy anyway right? But it sort of like maybe he wanted just to talk. He wanted to get in your space. He wanted to like [name of supporter] was saying, he reaches out to grab your hand and if you don't know that he just wants to grab your hand, then of course you would pull back or something like that right? But like [name of supporter] said he was very unpredictable so we not knowing him, him not knowing us, we not knowing what's triggering this kind of made you feel like oh ok, what is he doing? He's getting really close, he's yelling right here."*

A third participant identified CCS training as accounting for the change in behaviour and the result of supporters feeling safe. The participant said:

> *"He was threatening before. I mean when you see reports before, he was perceived to be threatening and more threatening, so the questions is was he more threatening prior to this training, have things changed?...Yeah because probably because we've changed too. Because we know now that that's why he's upset, so you can put a reason to why he is upset and be accepting of it…We approach things in different ways than what we did."*

In Community Living Prince Edward and Community Living Chatham-Kent locations the participants felt less physically vulnerable, but the rest of the scores did not change in this sample. Focus group data did not completely align with this as there were indications of decrease in physical vulnerability but also improvement in physical safety and emotional well-being.

One participant noted:

> *"I know for myself, I work at another location as well and there's one female you kinda get to know her signs so you know when to leave the room, like she's in an apartment by herself…um…she starts getting really repetitive and then you can see her eyes just start to go really big so you know you have to exit the room or she's going to target you, you're just kind of taking yourself out of the situation… I feel safer like you just give her a moment to calm you just set a timer for her, let her calm and then you can go into the room and speak with her and she's usually calm by then."*

Another participant added:

> *"I feel safer in a sense that I am catching behaviours almost before they start or at the very beginning. You know especially being in a vehicle with someone in close quarters …so I would say definitely in those type of situations. Yeah."*

A third participant concurred:

> *"Yeah so when I first started there'll be that wonder of what her day would look like. What's today gonna look like? Upon coming back from participating in Conscious Care, prior to being at the location, I had the mindset trying to implement the strategies going forward and being approached in a different way when arriving at the home. It was a difference…it wasn't what does today look like? I don't have that any more it's been positive greetings…"*

Emotionally speaking, a participant said:

> *"There is a better connection with all the staff. He's got a better emotionally connection with everybody because he pushed everybody away before and now he's accepting us….so it's more positive, just generally day to day it's more positive… because you can talk to him, before it was always no, no, no, now he'll actually look at you and he'll talk to you."*

Job Satisfaction and Job Performance:

Participants in the focus group provided positive responses to a question about how CCS has influenced their job satisfaction and job performance. Though not very explicit in the quotes below, the respondents indicated satisfaction with their job and success with their performance.

Participants working with a medium to high risk individual explained how CCS strategies have helped them to do their job better:

> *"I also think from a supporting a staff point of view it's been very helpful because you know within our agency our house has a tendency to be looked upon with fear because we're the treatment house. We have specialized walls and specialized windows and specialized med logs. And when we are training people there's an inherent fear as well because with [name] we wear bite jackets and bite sleeves. So I think that for the agency to be able to look at it differently, to look at [name] differently and his house differently and for staff who are coming in wearing the bite jackets, for them to have that mindfulness aspect and to be able to decrease their fear and their feelings of not being safe has really helped them and my ability to support him as well."*

Another participant from a different agency described how CCS was implemented at the workplace, the excitement and how they moved to sharing the information with family:

> *"I think increase in the meditation and the calming yourself you know what you take into your home. We had an opportunity to share it with all of the support workers at [name of support location] and we've implemented before our team meeting, we do a mindfulness exercise and you know I was very excited to take it home and share some of the information with my family and you know just giving hints about you know there were different sections different pages that I would mark and I would want my daughter to read this or my husband to see this I want you know just because it was so very good 'a-ha' moments, really."*

Two participants in the same agency noted how CCS has changed staff approach:

> *"It makes a difference how you respond to people at work whether it's with coworkers or with other individuals or high stress situations it don't matter. I just find myself, the way I respond to it is different than the way somebody else would respond to it."*

> *"I go in and I'm always bubbly to the ladies and put on some music and that's kind of how I start our shift every time…and it's just I think people are maybe more receptive and it's a good tone to start the shift with…and everybody's having a good time and I mean we've had so many new staff*

there too right…they're trying to get to know us so we're cohesive it's not newbies versus the oldies it's you know, so it's nice."

Finally, participants working in a team supporting a medium to high risk individual expressed their feeling of accomplishment and less stress after implementing CCS interventions and seeing the changes in those people they supported with challenging behaviours:

"I feel more accomplished."

"It's not as stressful."

With these feelings of accomplishment, comes the desire to want to share amongst colleagues as noted by the following participants:

"Successes are shared."

"I find I get a lot more, hey he did this today isn't that awesome [these stories are shared through] conversations, the communication book and phone calls."

"He was somebody that we thought you know this is gonna be the way he's going to be for the rest of his life but then it's like wow he's a different person…Because how many different things did we try with the same end result, until this [CCS] came along…Just like him initiating the walk the next day pretty much everybody knew…"

Overall, focus groups have shown an increase in job satisfaction, job performance, safety, and perceived emotional security due to CCS interventions.

Key Findings

As a result of CCS training, findings of the research study confirmed the following significant changes in individuals with disability and their support workers who participated in the training sessions:

a) Decreased number of assault cases by persons with challenging behaviour.

Most of the participants in five of the six agencies indicated a decrease in the number of actual assault cases (e.g. flipping chairs, hitting people, aggressing towards etc.) by the persons they support.

Amongst other things, the following were associated with the decrease in actual assaults:

i. Supporters' implementation of techniques to limit environmental toxins (e.g. limiting use of electronic devices);
ii. Medication for mental health (e.g. a medical prescription to manage bi-polar disorder);
iii. Dietary changes for the person supported (e.g. lowering the amount of sugar intake);
iv. Supporters recognizing triggers more easily and faster and giving persons supported what they need in order to reduce their anxiety; and
v. Increased self-confidence for supporters in meeting the needs of people with challenging behaviour.

b) Participants learned a lot of things that were not taught in school (college) or not offered in other professional training sessions (e.g. mindfulness, how the brain and stomach interact differently, electromagnetic fields, etc.).

Mindfulness has been shown in this study to help supporters to:

i. Be aware of themselves and the moment, calm themselves and give persons supported the time to process information in order to limit aggressive behaviour;
ii. Change their perspective and the way in which they respond to a situation as opposed to changing the situation in order to give persons supported a better opportunity for a better life;
iii. Have a compassionate approach letting persons supported know they can feel free to talk or cry; and
iv. Catch triggers of anxiety and address them before people they support become aggressive or self-abusive.

c) Mindfulness and faulty filters are the most significant benefit of CCS training on the supporters' ability to support people with challenging behaviours.

Survey data revealed that there was remarkable improvement in supporters' states of awareness, emotional competence and emotional self-regulation across all six agencies. This has proven to be essential for effectively de-escalating and managing individuals with challenging behaviours as espoused in focused group interviews.

d) Nutrition (with dietary changes e.g. lowering sugar intake, lowering gluten intake and adding supplements) and exercise (e.g. walking) have significant impact on persons supported.

Most of the primary individuals in each agency have become calmer and more focused since anxiety had decreased following changes in diet.

e) Overall improvement in the quality of life of most of the persons supported.

The following changes in people with challenging behaviours were identified in the focus groups:

i. Communicating better and clearer;
ii. Sleeping better;
iii. Walking (going out for walks);
iv. Being calm, focused and happy;
v. Interacting more with supporters (staff) and people (e.g. strangers in one case) within the community; and
vi. In the case of one supporter, opening their eyes as opposed to walking with closed eyes in the past and bumping unintentionally into staff.

Survey results showed significant enhancement of respondents' levels of confidence and efficacy of participants in supporting individuals with challenging behaviour (see Table 3 and 4) to live better lives.

Conclusions

CCS training has significant influences on people who have autism or other developmental disabilities, as well as their supporters.

Through the strategies and techniques garnered from CCS training, supporters can significantly influence individuals with challenging behaviours through prevention, reduction and management of agitation, anger and aggression to become calmer and focused with overall improvement in their quality of life.

The evidence presented in this report demonstrates highly positive results. Almost all six agencies reported significant improvements in their knowledge, skills and dispositions to effectively de-escalate challenging behaviour and work effectively with individuals with challenging behaviours to improve their quality of life. Most of the participants in five of the six agencies had successful implemented learnings from CCS training and experienced decrease in the number of actual assault cases by the persons they supported.

The research evidence clearly illustrated how CCS training has indirectly benefited an individual with challenging behaviour who was not included in the project as well as those who were not participants of the training. What this tells us is that the training is transferable and can make a greater impact on Ontario in general.

The research provides recommendations for future training, future research and to the Ministry of Community and Social Services.

Recommendations

Training

1. Provide training to everyone working with people with challenging behaviour. If this seems not to be feasible due to financial challenges, get training information to everyone involved in supporting people with challenging behaviours.
2. Create chapter summaries, videos to help participants share information from training with colleagues, parents and community members.
3. Connect stories to techniques on how they can be applied in the various homes.
4. Make timelines about the training clearer from the onset of the training.
5. Cost to be incurred by individuals with challenging behaviour selected to participate in the project should be specified prior to the beginning of the program for better planning.
6. Clarify from onset of training the expectations of the program – a clear plan or directive on how things will be happening.
7. Spread out the 8-hour training session over two or three days to reduce information overload and keep participants focused.
8. Develop a better approach in presenting the information on training from chapter to chapter. One chapter should be followed by evidence then transition to the next chapter.
9. Choose an appropriate time for the training – fall or winter when things are quieter is preferable.
10. Lead consultant should meet all people with challenging behaviour involved in the study, not just the primary people.

Research

Focus group and follow-up should be done a bit longer after training (at least six months after training).

Ministry of Community and Social Services

The Ministry of Community and Social Services should change the ODSP plan to include supplements. This will reduce cost incurred by persons supported with challenging behaviour.