

Aggregate Assessment Report Summary

March 15, 2016

This report includes a summary of the annual client data collected at Brain Injury Services. for the Adaptive Behaviour Scale – Residential and Community (ABS-RC: 2) and the Quality of Life Inventory (QOL) at

Adaptive Behaviour Scale – Residential and Community (ABS-RC: 2) January 2005 – December 2015

Using a blend of skill training and behavioural approaches, Brain Injury Services works with the clients and their family members to provide a variety of opportunities for skill enhancement. To assess skill development, Brain Injury Services utilizes an assessment tool, The Adaptive Behavior Scale: Residential and Community, Version 2 (ABS-RC: 2). This summary outlines data that has been compiled over the last ten years.

The ABS: RC-2 is a 118 item standardized and normed checklist of skills, abilities and problematic behaviour that is completed by a person familiar with the participant being assessed. It is composed of 18 subscales that are divided into two domains; 10 skill subscales and 8 behaviour subscales. The purpose of administering the ABS-RC: 2 is to assess functional skills, abilities and behaviour for purposes of planning and evaluating the effectiveness of community based rehabilitation with adults with acquired brain. The domain areas identified by the assessment often relate to ABI neuro-cognitive deficits and can be used in developing goals and objectives for individual program plans.

With the help of Dr. Bruce Linder, clinical director and psychologist at Brain Injury Services and McMaster University students, past research endeavors have provided us with normative information for adults with acquired brain injury living in the community. Community-based ABI norms for the ABS-RC: 2 were initially collected based upon a group of 126 adults in year 2000 that included Brain Injury Services clients, clients in one other community-based ABI agency in Southern Ontario, and individuals on a waiting list during the year 2003 for Brain Injury Services. This served as a basis for computing annual scores in comparison to a larger and more diverse group of ABI individuals.

Since 2005, the ABS: RC-2 has been administered annually to all Brain Injury Services clients. This involved a total of approximately 999 assessments (324 clients).

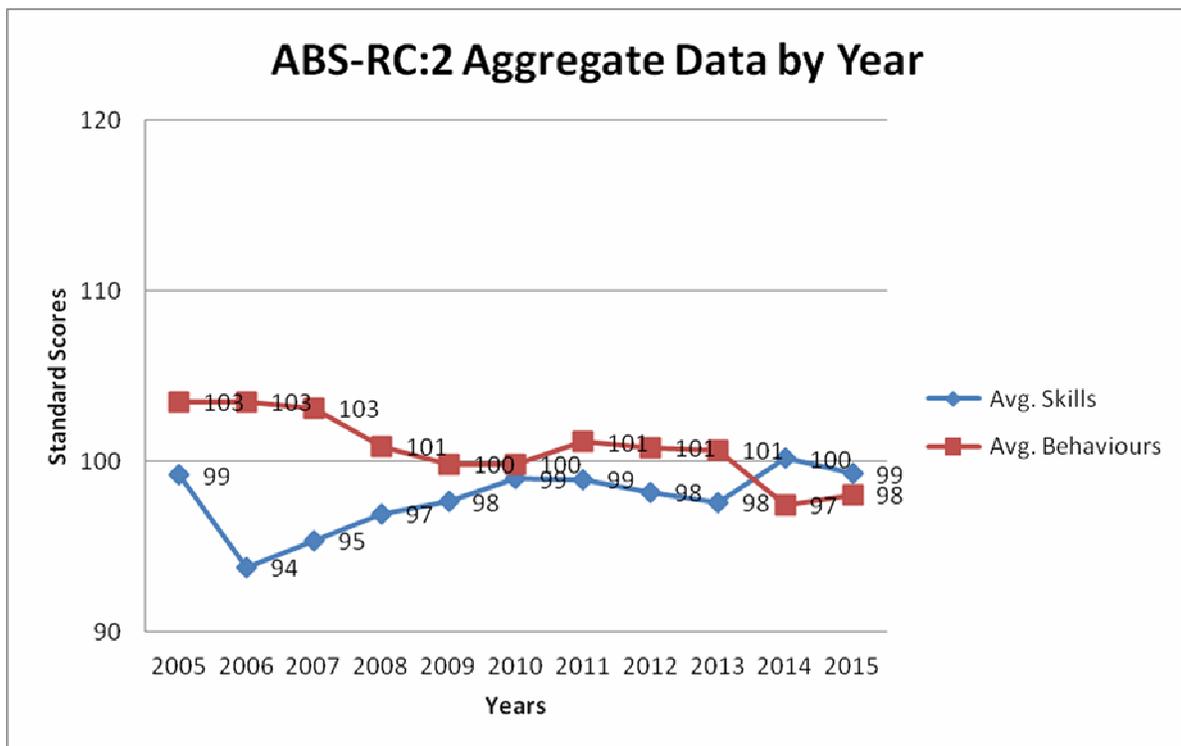
ABS-RC: 2 Data Analyses

The results answer three questions: (1) How have the skills and behavioural problems of the agency's clients overall changed over time (and with more programming); (2) How do the different programs compare in terms of participant skills and behavioural problems. (3) How have the skills and behavioural problems changed over time for the clients for each program.

1) Agency Change over Time

Figure 1 below provides the results of all agency clients over the eleven years of data collection. Overall skills and behavioural problems are expressed as "standard scores". Standard scores show how far scores are from the average for a population, in this case a large group of community living adults with acquired brain injury. The average range is 90 to 109; anything above or below this range is above or below average statistically. As can be seen, both skills and behavioural problems remained in the average range over the eleven years with no significant change over the last year. Correlations across the years confirm that the test-retest reliability and stability of the ABS-RC: 2 is strong.

Figure 1

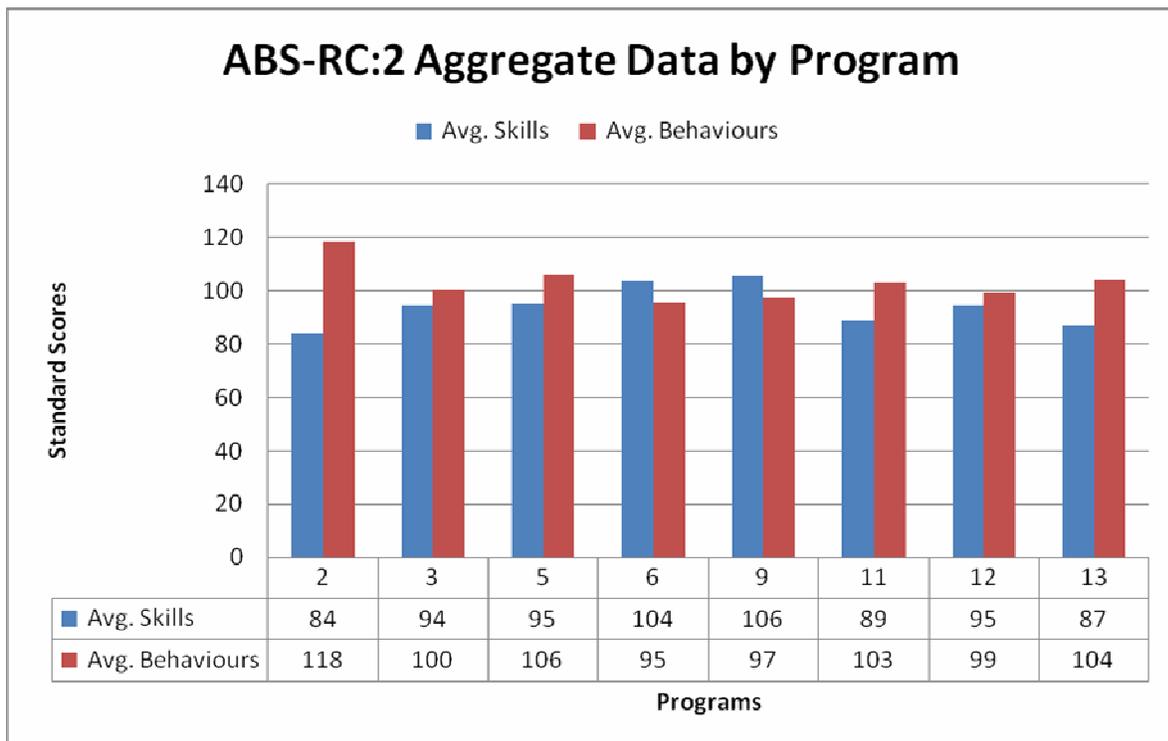


2) Comparison of Programs

Figure 2 below illustrates the statistically significant differences in both ADL skill and behaviour scores across the eight different services for 2015 data only. For example, the range in ADL skill scores across services was 22 with standard scores from 84 to 106; the range in behaviour scores across services was 23 with standard scores from 94 to 117. Combing data from all years, similar to past years, there was a highly significant negative correlation between ADL skills and behaviour across services ($r = -0.80$), meaning that services with higher than average behaviour scores tended to have lower than average ADL skill scores. This finding is consistent with theories that emphasize skill-deficits (e.g. communication, leisure, cognitive) as a contributing causal factor to the development of behaviour disorder in disabled populations.

Figure 2 also illustrates data collected during 2015 for 102 clients. Keep in mind that the average standard score range for both Skills and Behaviours is 90 to 105, anything above or below this range is above or below average statistically. As has been true for past years, Service 2 (CWP) has the highest level of behavioural problems. In contrast in respect to skills, highest scores were achieved by community services such as Outreach (Service 6) and Transitional Independent Living (Service 9), as would be expected.

Figure 2



2	CWP	9	TLS
3	Elmhurst	11	Kenny
5	JRC	12	Ravenda
6	Outreach	13	CH

3) Program Change over Time

The appendix to this report provides the progress graphs for each program, and can be consulted for details regarding changes in skills and levels of behavioural problems. Overall, there was no major change in levels of skills or behaviour problems.

Summary

In summary, the ABS-RC: 2 is a useful tool for assessing functional skills, abilities and behaviour for the purposes of planning and evaluating the effectiveness of community based rehabilitation with adults with acquired brain injury. Staff at Brain Injury Services will continue to collect annual data to track participant progress, but also to expand the data base for our understanding of long-term skill development, functional independence, and behavioural difficulties for ABI individuals living in the community.

Quality of Life Inventory (QOLI) January 2007 – December 2015

Upon admission and on an annual basis, clients at Brain Injury Services are asked to rate their satisfaction in 13 areas of life using the Quality of Life Inventory (QOLI). The (QOLI) provides a score that indicates a person's overall satisfaction with life as well as individual scores for satisfaction in the areas of Health, Self-Esteem, Goals and Values, Money, Work, Play, Learning, Creativity, Helping, Love, Friends, Children, Relatives, Home, Neighbourhood and Community. Life satisfaction is based on how well the client's needs, goals and wishes are being met in these important areas of life. The results are used to monitor client change, progress and overall quality of life over time. This report summarizes data collected from 304 clients over the course of nine years. The results are based on 1,173 completed QOL assessments. For 2015, 168 clients completed the QOLI.

Figure 1 provides the data for years 2007 to 2015 as the average percentile scores. A percentile score gives the percentage of individuals in the general population who score below the target score. So, for example, in 2007, the average Brain Injury Services client scored at the 39th percentile, meaning that 39% of individuals in the general population reported lower quality of life. The average range for quality of life in the general population is from the 25th to the 75th percentile. Therefore, as can be seen, the average client was in the average range for the general population during all years, with no statistically significant trend.

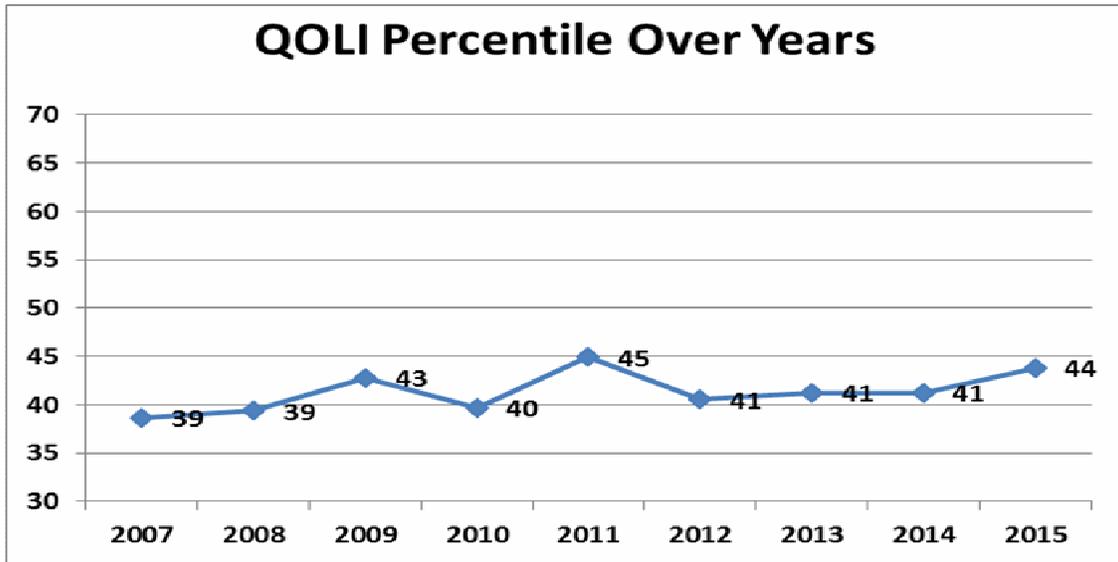


Figure 1: QOL Percentiles from 2007 to 2015

Aggregate Weighted Satisfaction from 2007-2015

- High Satisfaction: Raw Scores ranging from 3.6 - 6.0 are classified as High Quality of Life satisfaction
- Average Satisfaction: Raw Scores ranging from 1.6 - 3.5 are classified as Average Quality of Life satisfaction
- Low Satisfaction: Raw Scores ranging from 0.9 - 1.5 are classified as Low Quality of Life satisfaction
- Very Low Satisfaction: Raw Scores ranging from -6.0 – 0.8 are classified as Very Low Quality of Life satisfaction

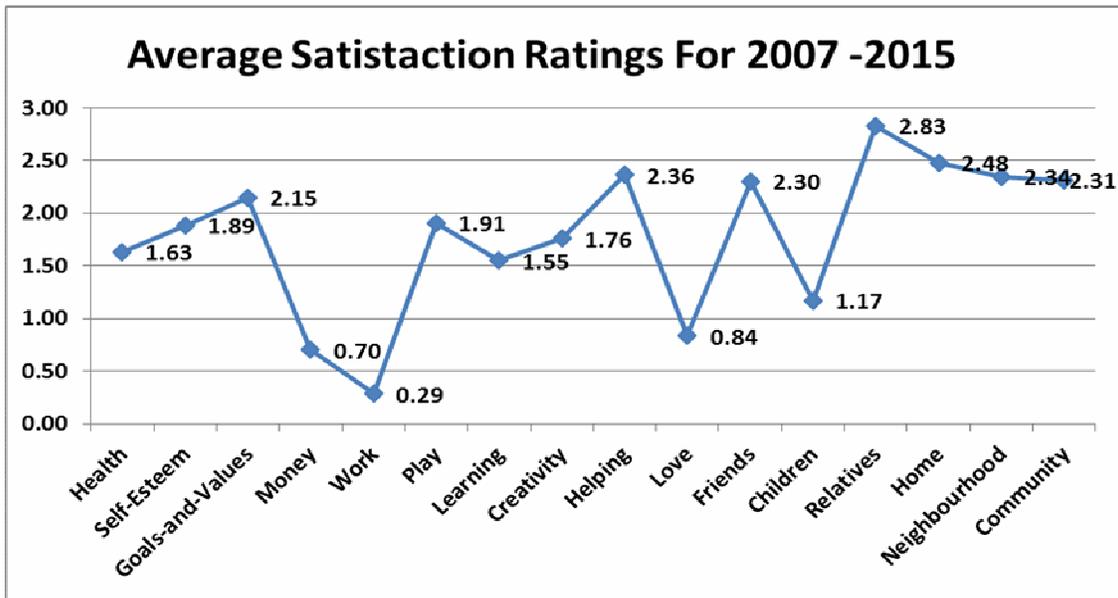


Figure 2: Average Weighted Satisfaction Ratings for years 2007 to 2015.

Figure 2 identifies the mean weighted satisfaction scores for each Quality of Life domain.

Average Satisfaction was rated in the areas of Health, Self-Esteem, Goals & Values, Play, Learning, Creativity, Helping, Friends, Relatives, Home, Neighbourhood and Community

Very Low Satisfaction was rated in the areas of Money, Work and Love. Low Satisfaction was reported for Children.

The agency results indicate that on average, clients were generally satisfied in all Quality of Life areas with the exception of being very dissatisfied with Money, Work, Love and Children.

In-Service Clients as Compared to Discharged Clients

To evaluate any differences in quality of life between in-service clients and discharged clients, follow-up QOL assessments were offered to clients at approximately six months following discharge from the agency. Over the past reporting period, 18 clients were contacted, with three clients available to participate in the follow-up assessment. Low response rate was due to clients declining to participate, client not available to participate, or lack of current contact information. Over the past eight years, a total of 20 clients have elected to participate in this follow-up.

In comparing data from the in-service client group to the discharged client group, the results indicate that overall quality of life tends to remain consistent up to a 6 month period after discharge. Overall scores across the eight years, indicates that clients in both groups report scores in the average range, at the 42nd percentile for the in-service group, and at the 37th percentile for the discharged group.

For more information or to view the appendix accompanying this report, please contact: lmcleod@braininjuryservices.com