DLA-20

Youth Executive Summary and Interim Case Studies

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Executive Summary

The DLA-20 is a functional assessment tool with versions for youth and adults. One purpose is to accurately record provider-client collaboration of assessed needs to target potential goals for treatment. All ages benefit from routine collaborative documentation around current symptoms and problems experienced when faced with serious symptoms in activities of daily living (ADLs), e.g., the symptoms of depression and typical functional problems around sleeping, eating, self-medicating, relating, working, or coping, etc.

Quoting Patrick Kennedy, A National Call for Measurement-Based Care in the Delivery of Behavioral Health Services (2015), "the DLA-20© Functionality Assessment tool is being used by community behavioral health centers to identify functional impairment, to develop specific clinical objectives and to measure and monitor progress towards recovery. The DLA-20 is a provider administered rating scale as opposed to a patient self-reporting symptom measure. The DLA-20 incorporates a 7-point scale with anchors to reliably rate how often or how well the client currently and independently managed each of the 20 activities of daily living (e.g., independently managing symptoms, personal safety, work, grooming, dressing, housing, self-care, time, sleep, medications, etc.). The National Council for Behavioral Health endorses and provides contracts for training in the use of research-backed outcomes measurement to help clinicians address functional deficits on individualized care plans."

Business Challenge

In the early 2000s, David Lloyd, Founder, MTM Services, was asked by a state behavioral health department to work with the quality improvement (QI) staff of all community behavioral health providers to focus on objectively defining "quality" and identifying an outcome measurement tool that could support the consensus definition. This is his summary of the business challenges:

"As we began a full day of consultation, I asked the QI representatives from each of more than 20 community providers to write on an index card their definition of "quality" in the context of behavioral health services. During the morning break, the MTM team collected the index cards and began to compare the definitions of quality. When the definitions were entered into a spreadsheet, we found that the QI staff had identified 15 distinctively different definitions of "quality behavioral health services." Definitions focused on a range of indicators, including timely access to treatment, case load management, reduction of inpatient psychiatric hospital admissions, reduction of symptoms, etc. The one key element that was not identified was how the behavioral health clinics could measure if clients were "getting better" and how to define what "better" means.

I then asked the participants to identify the outcome measurement tools used within each clinic and the responses and the number of different outcome tools presented a very complex model of how the individual clinics had decided to measure and support "quality" and "value." I then asked the state QI Director which outcome measurement tools/indicators the state behavioral health department required each of the clinics to

record and report. The state QI director identified three different measurement tools that were symptom-focused measures concentrating on age/population and mental health (MH) or substance use disorder (SUD). I asked how the outcome data reported by the clinics was used by the state to support continuous quality improvement for services provided to clients and how the data was shared with all clinics to support more focused and appropriate clinical staffing throughout the state. The response was very interesting in that the QI director indicated that the purpose of collecting the outcome data was not to support more effective and better quality services in a continuous quality improvement process, the data was collected to meet the state's requirement to have an outcome measurement process.

This open-ended outcome measurement process seems to be the norm, not the outlier. It is as if behavioral health clinics are collecting outcome data that becomes the end result of the process instead of using the outcome data collected to better inform clinical practices and identify the need for clinical practice changes to ensure better future outcomes.

Solution Description (continuing with David Lloyd's observations and report)

In the late 1990s, I consulted for a community behavioral health clinic in Georgia. While onsite, I had the opportunity to meet Willa Presmanes, QI director for that clinic, and discussed the need to measure quality and value. Willa shared the DLA-20 functionality-focused outcome tools she had co-authored and researched in the early 1990s. She had created versions of the DLA-20 tool for adult mental health, child mental health, adult co-occurring conditions, adult and child SUD and intellectual and/or developmental disorders (I/DD) that could be used across all populations, ages and needs.

Willa's research on the importance of using levels of functionality related to 20 activities of daily living (ADLs) as a basis of measuring improvement, quality and value instead of a primary focus on measuring symptomatology as a basis of measurement made so much sense. Many of the clients at community behavioral health clinics, by virtue of their diagnosis, will present some degree of symptoms throughout their lives. Therefore, using an outcome measurement tool that primarily focuses on level of symptoms will not produce any measurable improvements over time.

However, if the measure is based on how the clinic and the services provided the ability of the client to function at higher levels with the level of symptoms that remain, then not only has the quality of life of the client been improved, but also the clinic can more objectively measure the areas of functional improvement related to the 20 ADLs. Also, the ongoing ADL measurement through the use of the DLA-20 measurement tool will also indicate where additional support is needed in the treatment plan review process to gain improvements with specific ADLs that need additional support.

As I became more familiar with Willa's published research supporting the excellent inter-rater reliability of the DLA-20 using objective functionality-level anchors to support its validity, I became convinced that a primary focus on levels of functionality would provide an ideal outcome measurement model to demonstrate quality, value and whether or not

the client was getting better." (Lloyd, David, DLA-20 Functional Assessment Guide to Measuring Outcomes Forward, 2015)

Benefits

The benefits of DLA-20 are numerous. Programs use one basic tool for assessments and outcomes, for all age consumers >=6. Providers with all levels of education assess adults, children, youth transitioning to adults, adults presenting with multiple symptoms (across diagnoses, cultural expectations). Added advantages include the following: (1) multiple providers, all levels of treatment, focus on 20 non-judgmental variables, ADLs applicable to everyone; (2) providers attend one basic training around a defined tool (MTM requires training for youth programs separate from adult services), (3) one IT programming process for populations age >=6, and (4) administration receiving reports around 20 variables applicable to all persons in their community (including staff); (5) MTM Services offers Train the Trainer to certify providers so follow up with MTM is not required; (6) the tool and excel files are free to use or MTM Services will readily consult with any E H R vender to develop the tool.

The DLA-20 tools give consistent results when providers are trained, i.e., different providers rate the same client similarly over same period. The resulting scores are sensitive in that not all consumers with the same illness will be rated similarly. The ratings guide treatment focus and are therefore relevant. The ratings are service-driven, e.g., they determine amount of appropriate services or levels of care. Repeated measures document true improvements over time, thus data is valid for outcome studies. The tools have proven easy to use - providers can identify target priorities for goals and objectives. Resulting service plans or individualized treatment plans, reviewed in a timely manner, e.g., every 90 days, recognize progress and redirect treatment toward current symptoms and functional needs for recovery. When these issues flow, they are referred to as the "Golden Thread" to successful outcomes.

Technical Specifications

Providers typically complete the DLA-20 within 2 visits and reassess progress every 90 days. Provider inter-rater reliability is consistently measured at 95% of recipients at the end of training workshops making the continuity of care accessible across program lines.

Clinical focus is directed to current symptoms and the 20 variables that are recognized as having face validity. The tool defines 3 levels of wellness, e.g., "within normal limits," and 4 levels of severity in dysfunction in line with the ICD-10 Severity Indices.

A low score of 1-4 on any one DLA is an "assessed need" that the client can prioritize in treatment. The lowest scores of 1 and 2 highlight severe dysfunction and high risk. Scores of 5-7 indicate WNL strengths that are likely to be helpful or healthy behaviors that can assist in low functioning areas. By collaborating with the client, the shared experience of reviewing current symptoms and their impact on daily living activities often encourages

new treatment approaches. The difference in the consumers' views and those of the educated professional often provides fertile areas for discussion. The 20 DLA categories provide concrete touchstones that help identify goals and targets for improving outcomes. Most clients present with more than three problem areas and individualized service plans rarely have any more than three currently active goals for any 90-day interval. To create the treatment plan, multiple states use an "assessed needs" summary which lists all problematic symptoms and moderate-to-severe problems, i.e., DLA scores <=4. The client and treatment professionals then review and mark which areas are priorities for the client, which are referred out and which are deferred. Measureable objectives that link to the assessed needs are a key requirement in today's health care landscape, which demands much more than stabilization or maintenance of symptom.

Target Market: Behavioral Healthcare

Functional Assessments (FAs) are clinical needs assessments originally described in the Federal Registry, Volume 72, Number 155 (Reference August 13, 2007, pages 45,201-45,213). Expectations of FAs have been clarified in Department of Human Resource documents, 2012 and updated 2013 (see below). The FA is a key eligibility requirement for multiple recovery services under Affordable Care Act (ACA) and approved under Centers for Medicare and Medicaid Services (CMS) rules. The DLA-20 is an FA of 20 significant daily living activities (DLAs) that targets multiple primary care and behavioral health challenges.

Case Studies: Please see appended studies and documents

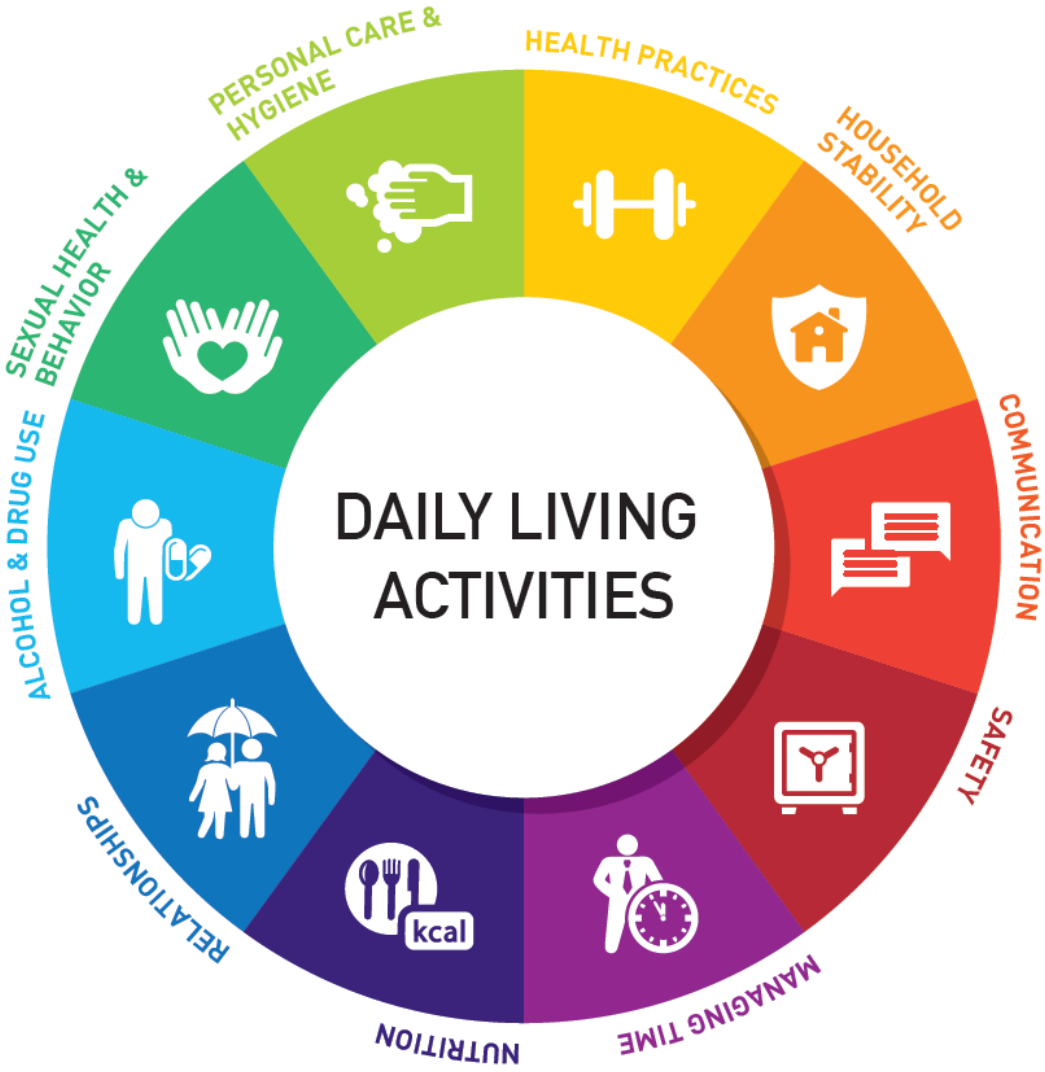
Summary

Behavioral health providers are required to have a reliable and valid measure of their clients' level of functioning in daily living activities (DLA) to determine treatment and demonstrate outcomes. The DLA-20 is a well-researched, reliable, valid and academically peer-reviewed tool. It is a one-of-a-kind comprehensive functional assessment and outcome measurement tool that requires user training to accurately score functioning with objective criteria.

The 20 functional activities targeted on the DLA-20 are universal ADLs that apply in all walks of life, regardless of age or health status, cultural background and regardless of diagnosis. Children function differently than adults so each of the 20 ADLs on the DLA-20_Youth version have age-appropriate definitions of wellness. To accurately and reliably measure problems, challenges and subsequently, successes, the 7-point rating scale has anchors or qualifiers for each of the 20 variables. Qualifiers for challenges around nutrition, sleep, coping, among 17 other ADLs, ensure persons served define severity of dysfunction reliably. Providers help contrast illness to wellness "within normal limits" (WNL).

Both client and provider need clear expectations around participation in treatment plans. The providers are trained to use definitions and anchors for scoring by certified trainers and clients are trained by their providers to plan for healthy choices over time through treatment plans and repeated assessments. Both parties, especially 6-12 year olds, benefit from repeated measures to minimize negative expectations about treatment or personal and peer biases about behavioral health and illness. Reliably measuring and reporting is the precursor to validity, e.g., using the tool for outcomes measurement.

Interim Outcomes for SED Youth Day Services Program
(ages 6 – 12)



Willa Presmanes, MEd, M.A.,
DLA-20 Functional Assessment Guide to Measuring Outcomes

MTM SERVICES

Statistics by Brian Dates, Southwest Solutions, Detroit, MI

Interim outcomes for SED youth (ages 6 – 12) day services program

The following DLA-20 data was analyzed for a treatment program serving 48 youth ages 6 – 12 in intensive day support services. The subject youth were diverse in cultural backgrounds with multiple behavioral health symptoms classified in severely emotional disorders (SED). "The goal of the Day Treatment program is to return students to a less restrictive community-based, educational, vocational, or work placement. Working with parents and multi-disciplinary teams, providers develop behavioral and academic goals and objectives which are measured quarterly." The following is information provided for clients, families on the program website.

Philosophy

The foundation of the Day Treatment program is guided by two treatment philosophies: milieu and family systems. Our belief is that children learn best when lessons are integrated in the context of here and now experiences of success. The classroom is the "milieu" or community that enables the student to feel successful and to learn about the importance of self and other. The classroom becomes the context that provides the student with a sense of belonging. In this community, the student has the opportunity to learn and to practice the skills necessary to function in a classroom setting, and to interact in more positive ways with parents, teachers, peers and other adults.

Our belief is that we are working in partnership with parents and guardians to support their children to reach their goals. Therefore, an important component of our program is family involvement. Parents or guardians, and families, belong to our school community. Our aim is to support the parents or guardians to have a strong voice and presence in the classroom and in our school community.

MTM Services measures inter-rater reliability after workshops. There is no validity without reliability. Providers prove ability to agree on definitions and anchors for scoring important outcome variables. Inter-rater reliability (Alpha) was .902, satisfactory at 1st administration, .874 satisfactory at 2nd administration (approximately 90 days), and .953 at 5th administration (12 Month Review). The following numbers represent good inter-rater reliability over repeated measures, quarterly for one year.

Reliability Analysis: Initial Administration

Reliability Statistics

Cronbach's Alpha	N of Items
.902	19

ANOVA

		Sum of Squares	df	Mean Square	F	Sig
Between People		461.474	39	11.833		
Within People	Between Items	258.129	18	14.340	12.307	.000
	Residual	817.976	702	1.165		
	Total	1076.105	720	1.495		
Total		1537.579	759	2.026		

Grand Mean = 4.11

2nd Administration (90 days from intake)

Reliability Statistics

Cronbach's Alpha	N of Items
.874	19

ANOVA

		Sum of Squares	df	Mean Square	F	Sig
Between People		335.995	38	8.842		
Within People	Between Items	209.644	18	11.647	10.445	.000
	Residual	762.672	684	1.115		
	Total	972.316	702	1.385		
Total		1308.310	740	1.768		

Grand Mean = 4.25

5th Administration (1-year review)

Reliability Statistics

Cronbach's Alpha	N of Items
.953	19

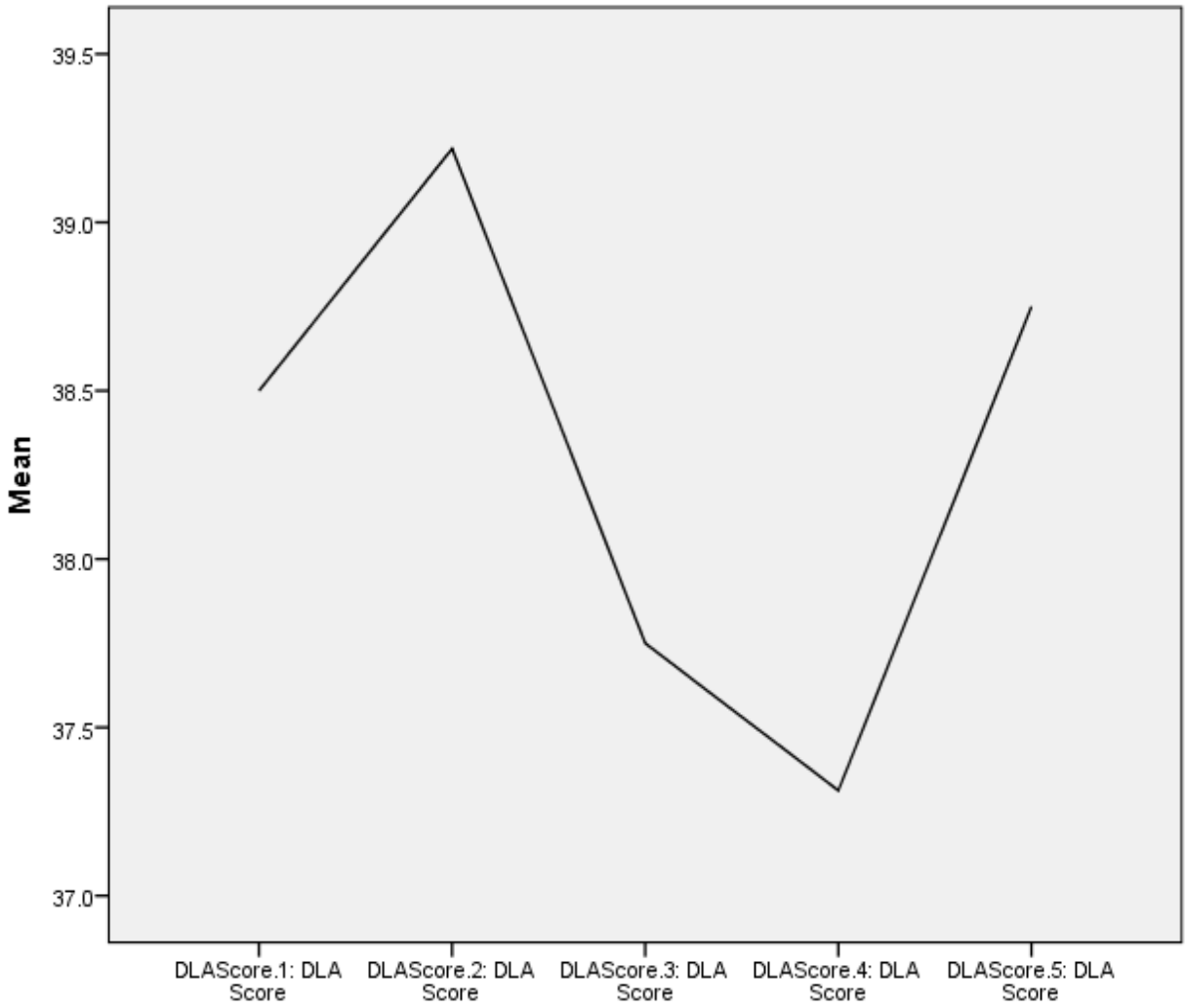
ANOVA

		Sum of Squares	df	Mean Square	F	Sig
Between People		237.242	14	16.946		
Within People	Between Items	61.979	18	3.443	4.366	.000
	Residual	198.758	252	.789		
	Total	260.737	270	.966		
Total		497.979	284	1.753		

Grand Mean = 4.28

The following charts graph repeated measurements for the 48 youth over one year. Statistics reflected good progress toward outcomes initially but drift around 5-6 months. Inter-rater reliability was retested, confirmed satisfactory; data highlighted the need for either follow up with MTM or certified trainers to prevent drift toward personal biases, away from goals that are part of definitions and anchors with activities of daily living. Current DLA-20 training modules routinely include follow up with providers or certified trainers within 5 months of initial training ensuring more consistent results toward outcomes..

Total DLA-20 Score is a composite of 20 activities of daily living. Much progress in overall functioning was noted from assessment to the 90-day review. While there was no significant change over the first year of treatment, staff refocused efforts in the last six months following a DLA-20 review with MTM Services. MTM consultation with providers at the 6-month review refocused on consistent education about students' individual DLA-20 problems and goals.



Repeated Measures

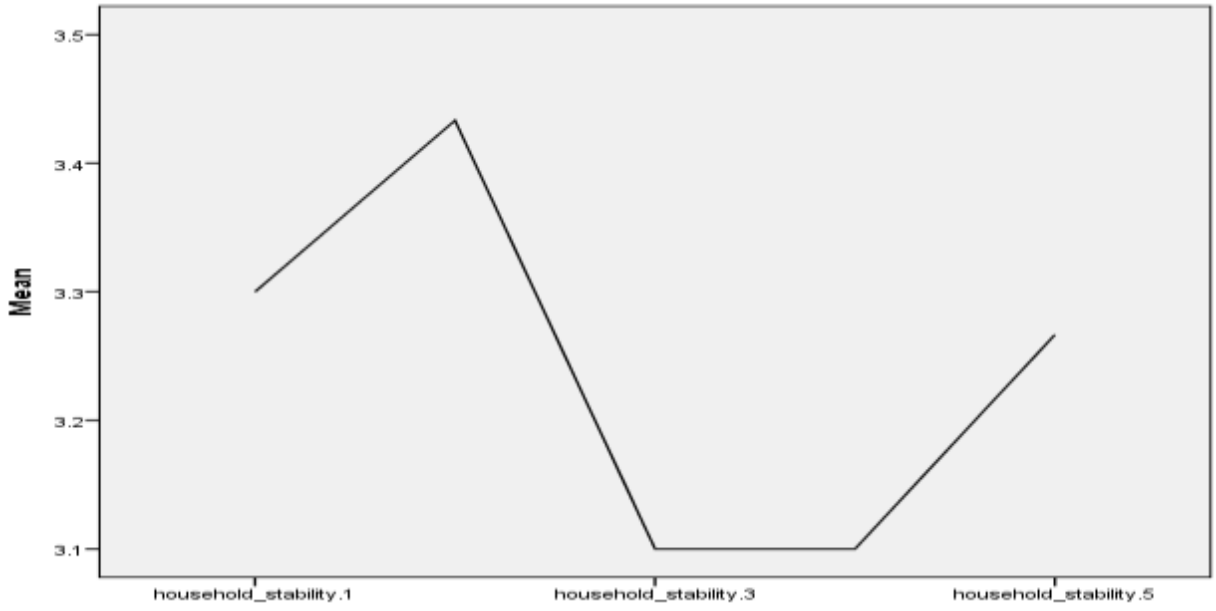
		Sum of Squares	df	Mean Square	F	Sig
Between People		8056.394	31	259.884		
Within People	Between Items	75.650	4	18.912	.667	.616
	Residual	3517.950	124	28.371		
	Total	3593.600	128	28.075		
Total		11649.994	159	73.270		

Instability in housing and the subjects' functional scores correlated with negative variations in total DLA-20 functional scores. The definition of a strength in this area (score >=5) is as follows: *Housing is stable and youth contributes to stability in the home (age-appropriate). Respect others and property. Share in chores, involve caretakers in school related projects, grades.*

The mean scores were 3s and some students scored 2 which indicates the following:

2 - Severely limited in keeping or maintaining stable housing, e.g., sometimes on street, needs or uses constant assistance, likely protective help	3 - Dysfunctional in community residential housing, unstable, Limited self-sufficiency; e.g., relies on respite, assistance, private or self-help home	4 - Stable community housing but housing may be inadequate or s/he may be only marginally self-sufficient in residence.	5 – GOAL: Moderately self-sufficient in stable housing - independent, private residence with routine, low level assistance.

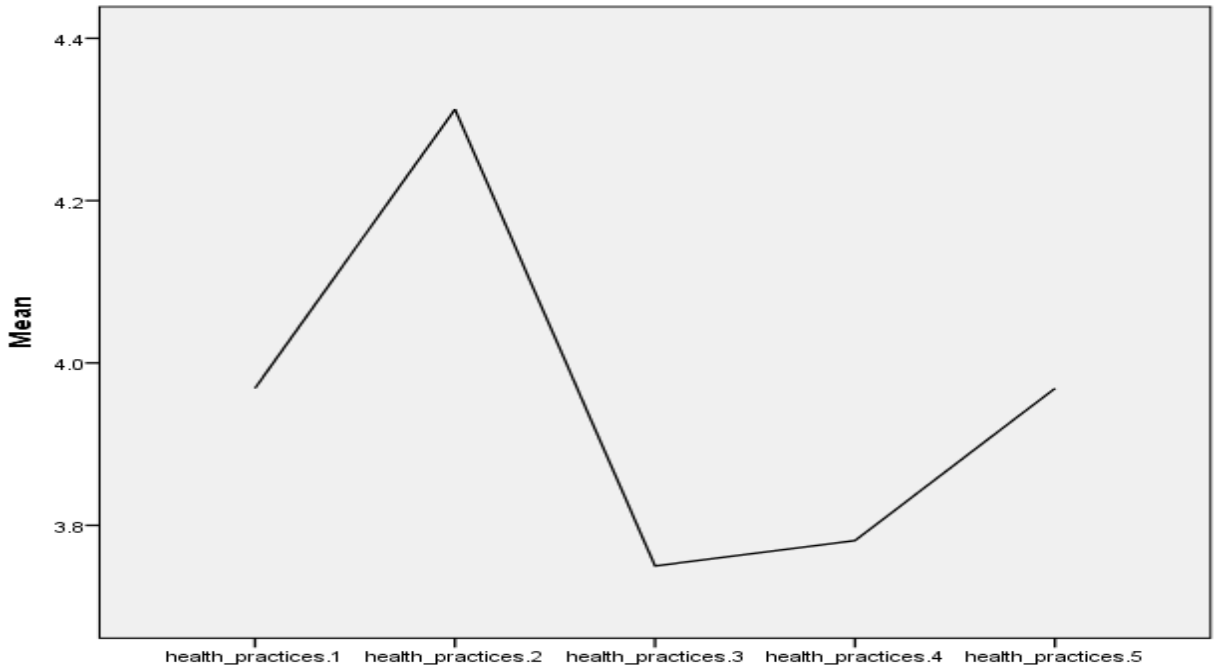
While there was no significant change over the first year of treatment, staff refocused efforts in the last six months following a DLA-20 review with MTM Services.



Repeated Measures

		Sum of Squares	df	Mean Square	F	Sig
Between People		98.560	29	3.399		
Within People	Between Items	2.427	4	.607	.796	.530
	Residual	88.373	116	.762		
	Total	90.800	120	.757		
Total		189.360	149	1.271		

Health practices, DLA#1, generally summarizes clients' behavior health. The definition of "WNL" (within normal limits) is as follows: *Assist or manage adequate weight, moods, outdoor exercise, aches, pains. Take medications or over the counter drugs with adult supervision only*.



The graph shows that symptoms of SEDs appeared to respond to treatment protocols in the first 90 days. However, after varying mid-year, these ADLs were not rated significantly different at the annual review.

Repeated Measures

		Sum of Squares	df	Mean Square	F	Sig
Between People		150.694	31	4.861		
Within People	Between Items	6.412	4	1.603	1.720	.150
	Residual	115.588	124	.932		
	Total	122.000	128	.953		
Total		272.694	159	1.715		

Not significant

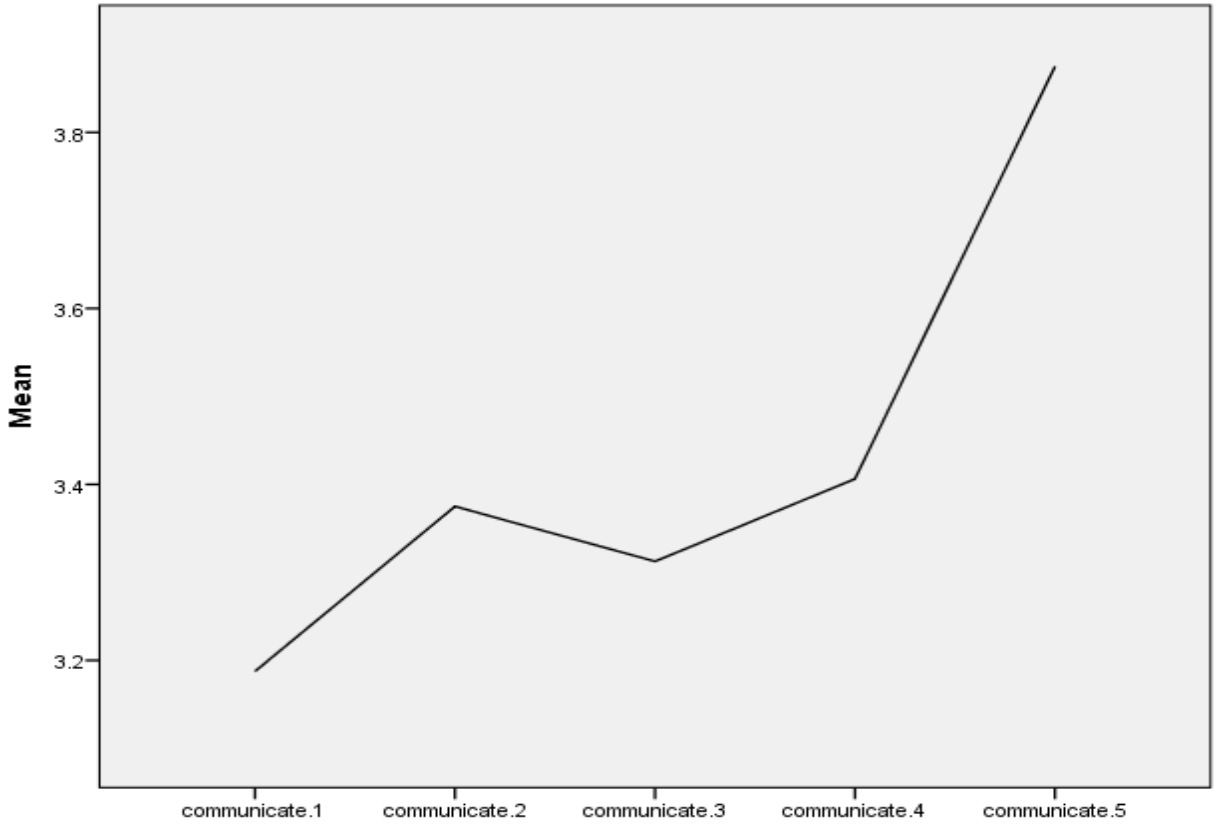
Mean scores, of course, do not capture the range of impairments demonstrated in the raw data so the following anchors for scores of 1 – 4 are provided below:

1-Evidence of danger to self/other due to MH; No self-care, evidence of breaks in reality, requires pervasive interventions	2-Marked limitations in self-care &may have physical complications , extensive help for very severe mental impairments, concern for danger to self/other	3-Limited self-care & compliance, serious impairments in moods, symptoms, mental status, maybe physical issues prompting continuous help for health care.	4-GOAL -Marginal self-care and compliance with health issues or prescriptions, managing moods is moderate problem; requires scheduled low level mental health assistance

Improvements in communication were statistically significant. The data indicated youth benefited from provider treatment protocols. The definition of WNL was *Greets adults. Listens. Expresses feeling, anger, opinions effectively.* Scores on admission steadily improved from "serious" problems (score 3) to "moderate" challenges in expressing feelings, anger, opinions effectively.

The anchors for serious, marginal to moderately effective describe the progressive change in individual scores:

3 -Limited or ineffective verbally, nonverbally; maybe withdrawn or hyper demonstrating multiple symptoms	4-Not clear about problems, marginal effectiveness in communicating with teachers, family, staffs.	5 –GOAL-Moderately effective in communicating with others, benefits from supports



ANOVA

		Sum of Squares	df	Mean Square	F	Sig
Between People		102.844	31	3.318		
Within People	Between Items	8.775	4	2.194	3.333	.012
	Residual	81.625	124	.658		
	Total	90.400	128	.706		
Total		193.244	159	1.215		

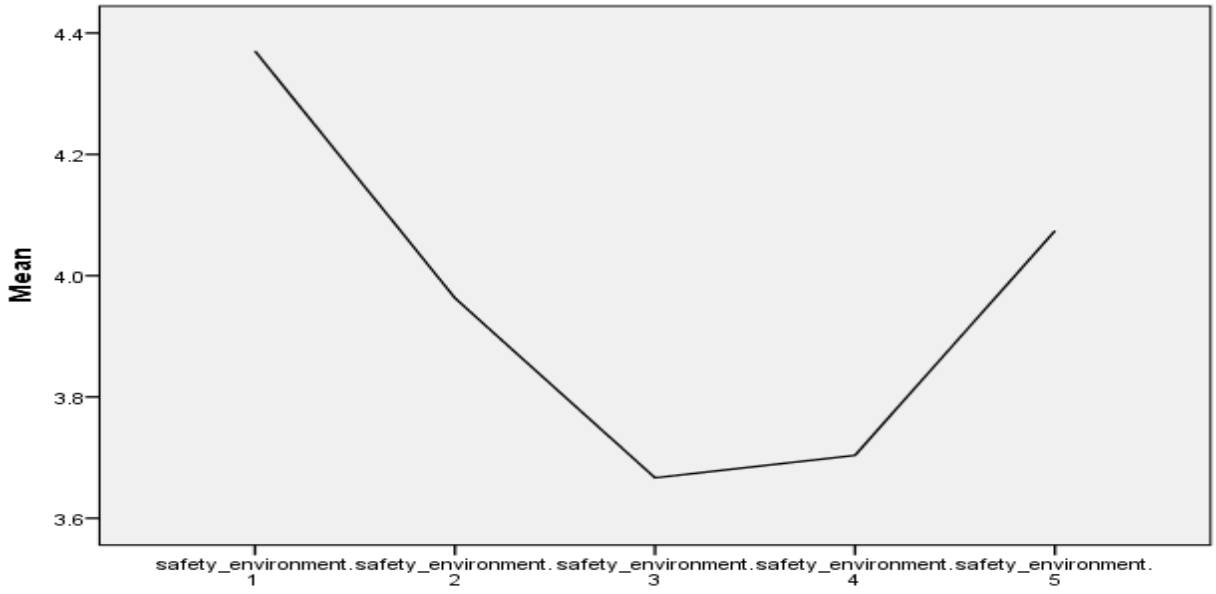
Significant Improvement

Ratings indicated students were less able to make safe decisions after one year, e.g., fewer behaviors indicated *playing safe, avoiding guns, knives, matches, danger people or places where there is likely trouble or an abuse potential.* "Safe" behavior health includes no suicidal or homicidal thoughts, behaviors.

A decline from 4 to 3 would include students with scores in the following ranges:

2 - Marked limitations in safety around home, community; needs/has extensive level of continuous supervision.	3-Makes unsafe decisions; "at risk" e.g., abusive or abused, cognitive limitations, needs supervision.	4 -Marginally safe, aware and self-protective, benefits from regular monitoring, more than expected.	5 GOAL - Moderately safe, good decisions, benefits from routine care-givers (e.g. home visits by helping persons).

While there was no significant change over the first year of treatment, staff refocused efforts in the last six months following a DLA-20 review with MTM Services.



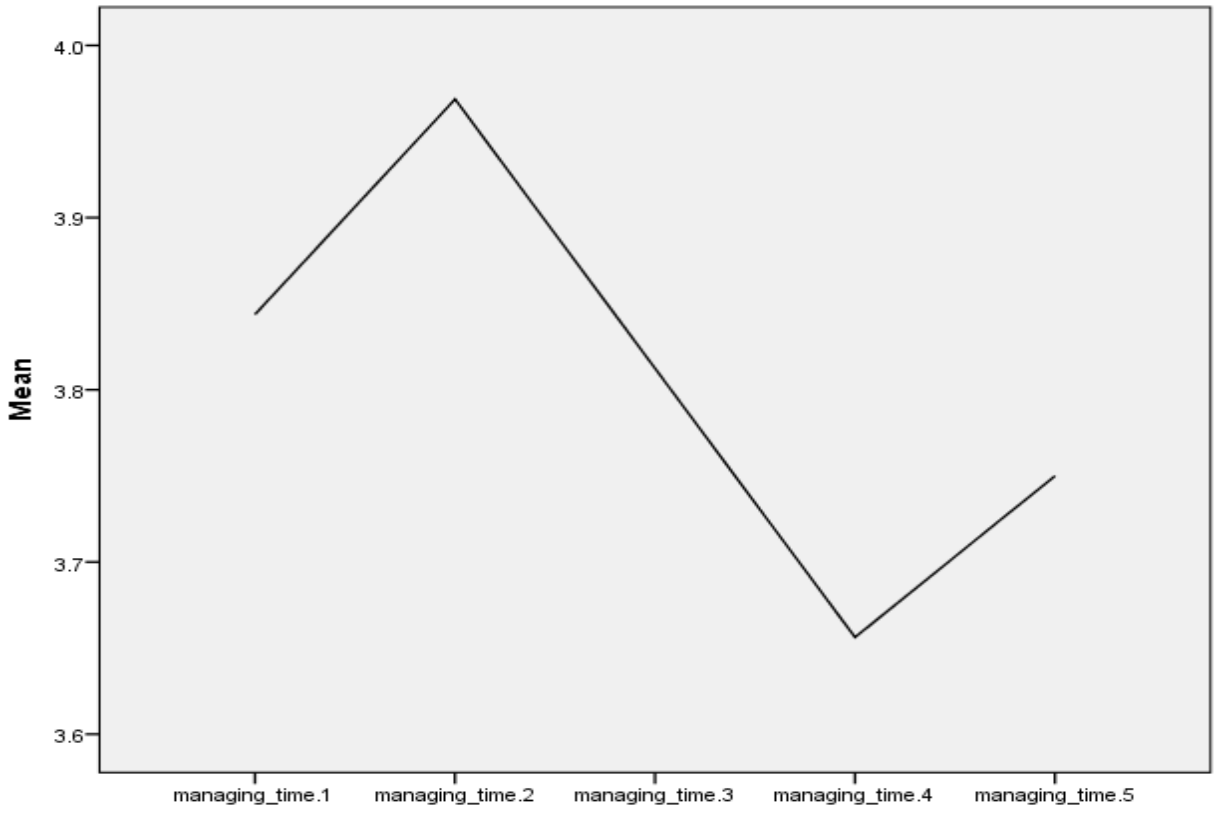
ANOVA

		Sum of Squares	df	Mean Square	F	Sig
Between People		194.933	26	7.497		
Within People	Between Items	8.993	4	2.248	3.783	.007
	Residual	61.807	104	.594		
	Total	70.800	108	.656		
Total		265.733	134	1.983		

Significant Decline

There was no significant improvement in time management, e.g., *timely routines, sleeping better, completing homework assignments in timely manner.* Scores ranged from 3-4 on DLA-20. While there was no significant change over the first year of treatment, staff refocused efforts in the last six months following a DLA-20 review with MTM Services.

2-Marked limitations in routine time management, needs or uses continuous extensive direction, supervision	3-Limited, e.g., poor sleep, mealtimes, management of school, meds; might require constant direction	4-Marginally effective, disruptions in routines; uses regular direction, e.g., prompts	5-GOAL-Moderately effective time management, benefits from routine prompts, direction of others.



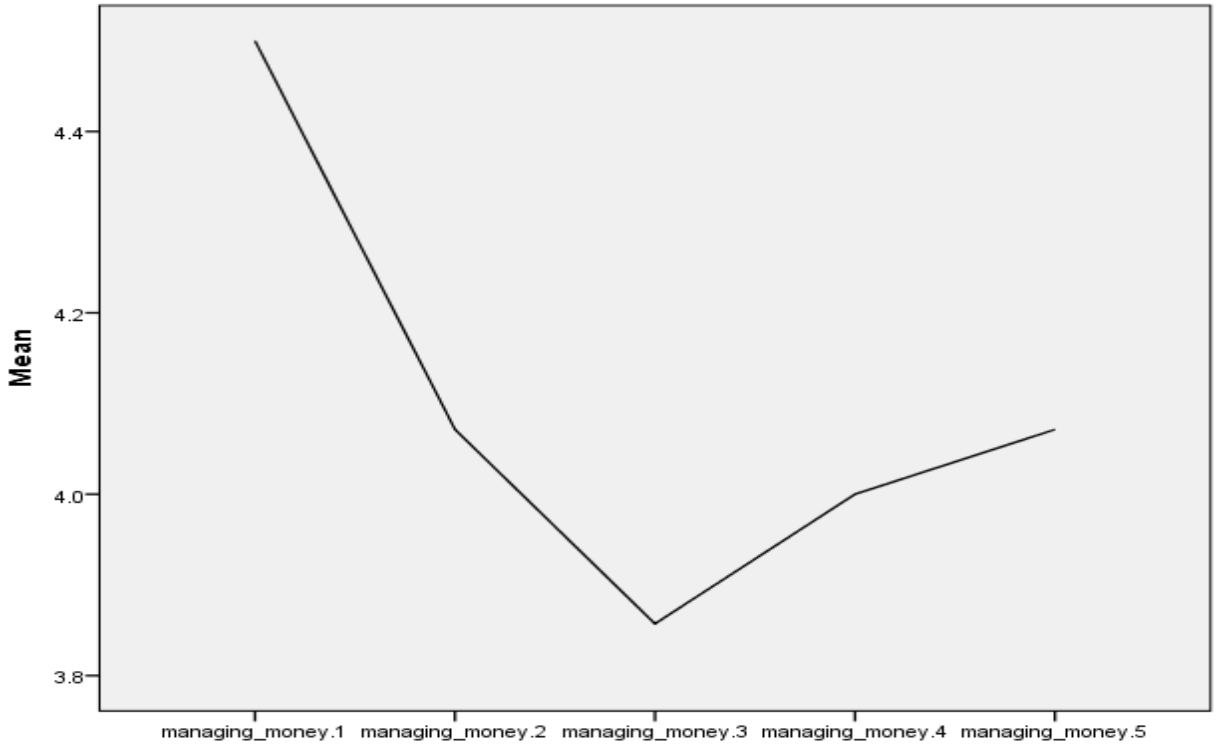
ANOVA

		Sum of Squares	df	Mean Square	F	Sig
Between People		108.194	31	3.490		
Within People	Between Items	1.713	4	.428	.596	.666
	Residual	89.088	124	.718		
	Total	90.800	128	.709		
Total		198.994	159	1.252		

Not Significant

The youth were closely monitored for their management of "things of value", e.g., includes "money," or personal items so there appeared to be no change in taking responsibility of personal "stuff." Score >=5 indicate *Reliably handles or manages monetary allowance. Abstains from overspending personal limits. Avoids betting, stealing, borrowing* so no low score indicates there was no stealing, breaking other's things of value would have significantly lowered scores. The scores hovered in the low 4s as indicated below:

3 - Mishandles personal/other's possessions; Minimal participation in managing personal finances; no allowance or no choices- no control	4 - Marginally manages personal allowance, things of value to child & others, moderately participates in chores, tasks to earn rewards	5 – GOAL-Moderately independent in managing personal finance, min. intermittent assistance from others, significant participation in managing assets



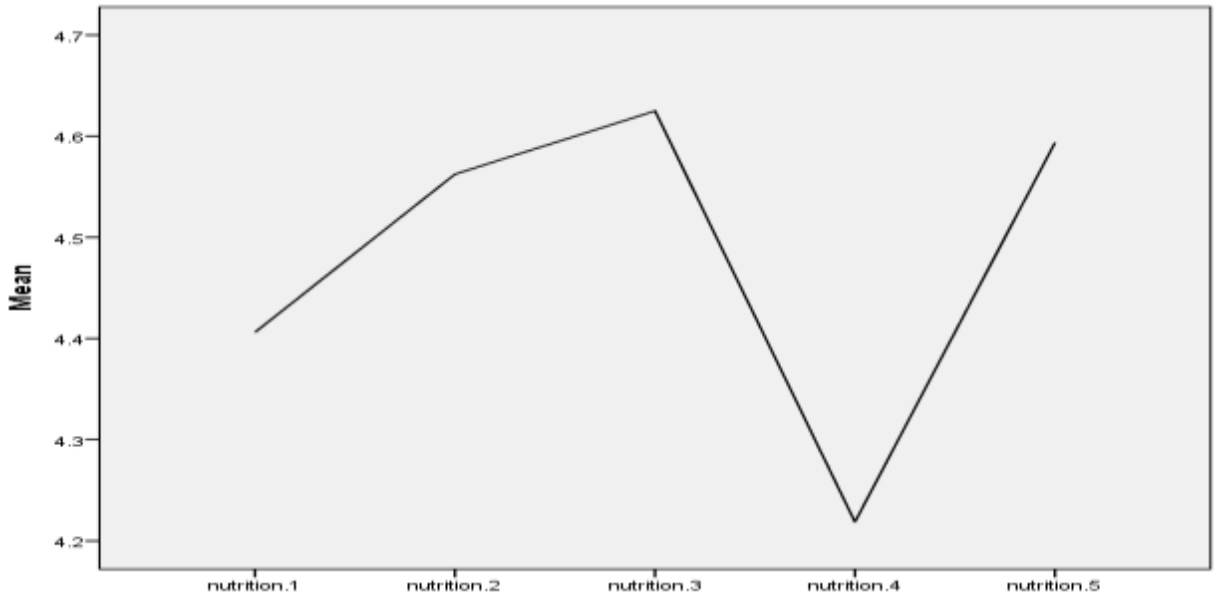
ANOVA

		Sum of Squares	df	Mean Square	F	Sig
Between People		51.100	13	3.931		
Within People	Between Items	3.229	4	.807	1.235	.307
	Residual	33.971	52	.653		
	Total	37.200	56	.664		
Total		88.300	69	1.280		

Not Significant

Poor nutrition hampers mood regulation as well as effectiveness of many prescription medications. While changes over time were not significant, improved nutrition to almost 5 which is "within normal limits" dietary intake for youth is appreciated and celebrated. WNL definition: *Eats at least 2 basically nutritious meals with caretakers. Eat healthy snacks that reasonably limit sugar and caffeine.* While there was no significant change over the first year of treatment, staff refocused efforts in the last six months following a DLA-20 review with MTM Services.

3 - Serious limitations and serious nutrition needs; does not eat well or limit problem foods, e.g., sugar, caffeine drinks, limited participation in personal nutrition.	4 - Marginal independence managing nutritional foods 2x/day; some age-appropriate participation in meal planning, shopping, and preparation.	5 – GOAL: Moderately independent in eating nutritional foods 2x/day, benefits from assistance, but age appropriately participates in meal planning, shopping & preparation.



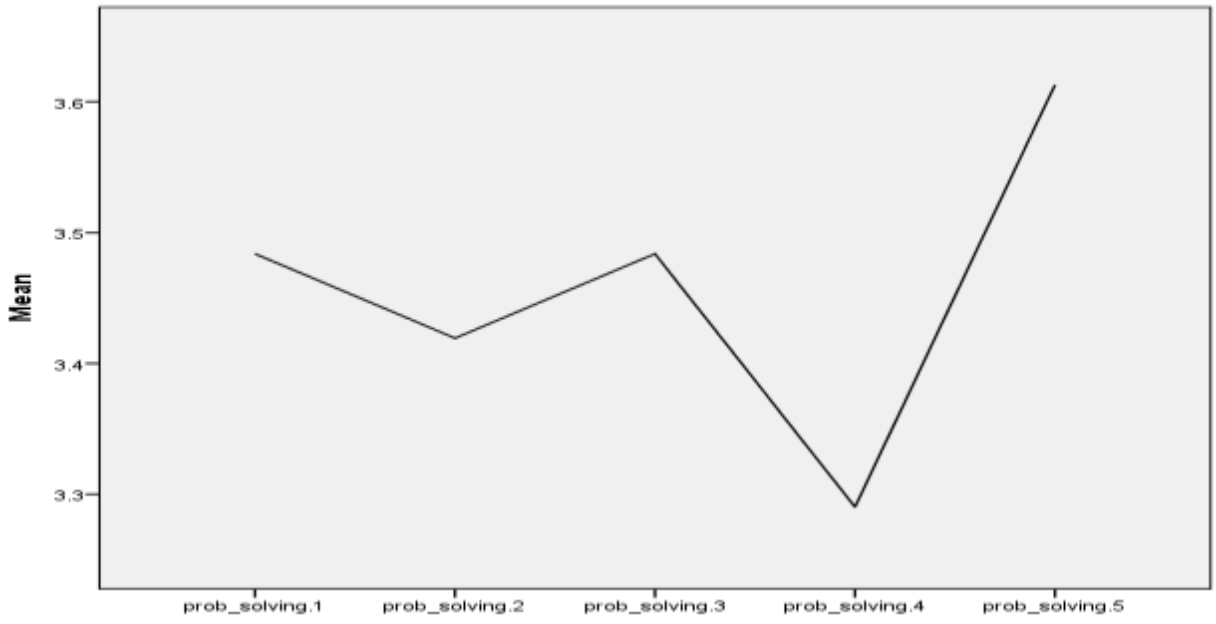
ANOVA

		Sum of Squares	df	Mean Square	F	Sig
Between People		84.744	31	2.734		
Within People	Between Items	3.662	4	.916	1.056	.381
	Residual	107.537	124	.867		
	Total	111.200	128	.869		
Total		195.944	159	1.232		

Not Significant

Problem solving skills improved greatly in the last 6 months but were not statistically significant from intake. The definition of WNL problem solving includes the following: *Understand presenting problems, reasons for seeking services. Focus on possible solutions for age-appropriate time periods. Assist or manage difficult situations.* It should be remembered that the data reflects mean scores and there were youth whose problem-solving skills were scored 1 – 2, considered high risk and required supervision. The following anchors reflect scores 1-4, extremely serious to marginally challenging problem solving activities of daily living.

1 - Evidence of danger - No problem solving, pervasive needs, approaching health endangering threat; or others structure and handle daily living problems	2 - Very severe limitations in problem solving, often involving constant supervision, minimal participation in problem solving.	3 -Seriously limited in meeting day to day needs, solving problems at school, home; requires interventions, limited participation in treatment related problem solving.	4 – GOAL: Marginally self-sufficient in day to day problem solving, often needs or uses regular assistance, participates in treatment-related problem solving.



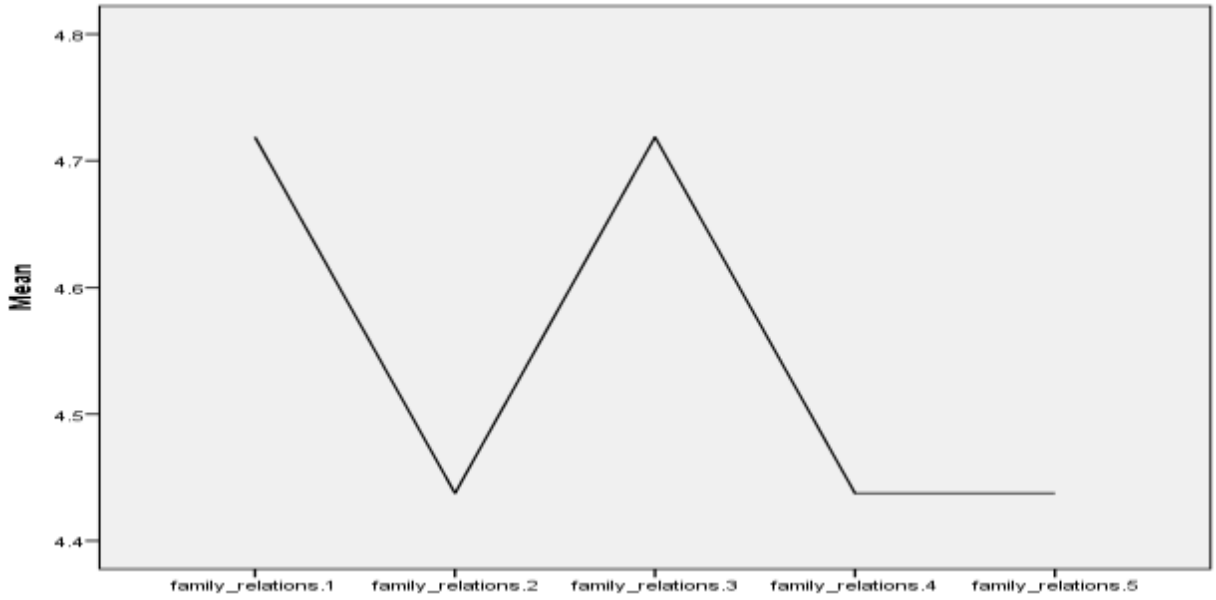
ANOVA

		Sum of Squares	df	Mean Square	F	Sig
Between People		91.277	30	3.043		
Within People	Between Items	1.703	4	.426	.831	.508
	Residual	61.497	120	.512		
	Total	63.200	124	.510		
Total		154.477	154	1.003		

Not Significant

Improving family relations is a goal of this program and lack of progress was discussed with staff. Score >=5 indicated the youths *Feel close to at least one other person at home. Get along with family or caretakers. Feel loved.* It was thought that housing instability contributed greatly to the variable results. Providers were not able to focus on this issue as much and as planned. The mean scores remained in the 4 range but the range of individual values were 3-4 as follows:

3 - Dysfunctional and disruptive relationships or no positive interaction. Complications may involve multiple residences, out of home placements	4 - Marginally functional family relationships (i.e. relationships are often stressed or infrequent, superficial, unreliable).	5 – GOAL: Moderately effective continuing and close relationship with at least one family member or significant other



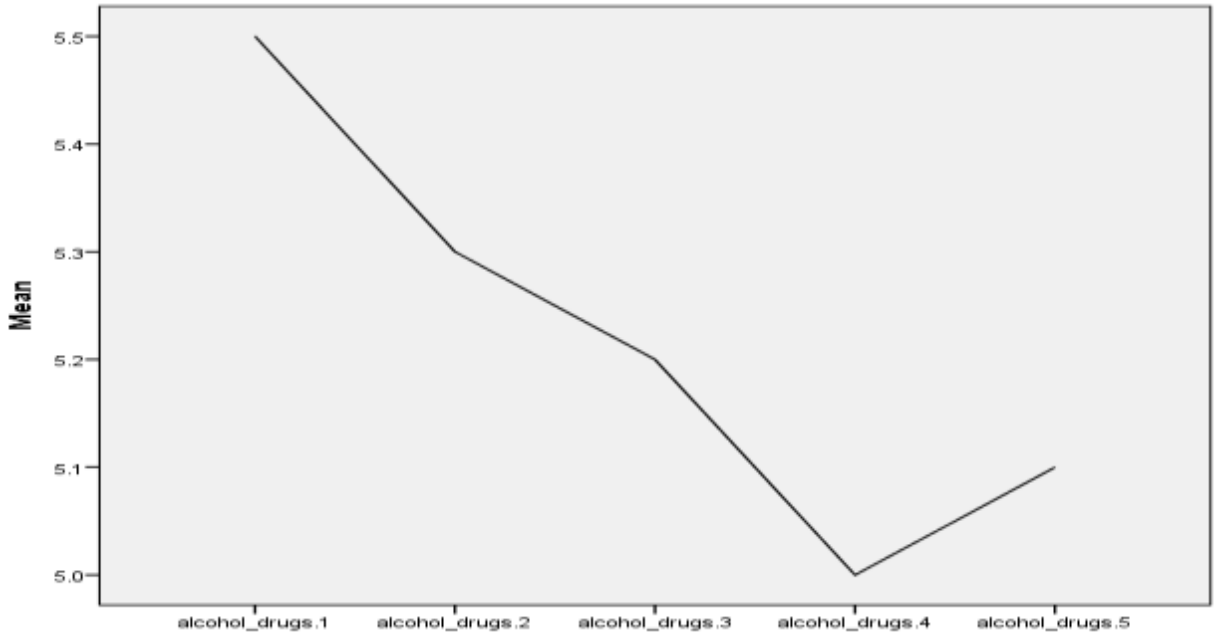
ANOVA

		Sum of Squares	df	Mean Square	F	Sig
Between People		203.200	31	6.555		
Within People	Between Items	3.037	4	.759	.861	.489
	Residual	109.363	124	.882		
	Total	112.400	128	.878		
Total		315.600	159	1.985		

Not Significant

The youth were supervised around alcohol/drug and scores remained in the 5s. Optimal scores were not given because of experimenting with alcohol when available in households or over the counter/prescription meds readily available for other family members. Scores averaging in the 5s mean the following: Abstains from smoking cigarettes, drinking alcohol, doing drugs or inhalants of any kind. Avoid high risk drinking situations and people who do drugs.

3 – (No students in this sample study) Current chemical abuse or dependence, acknowledges serious substance abuse but shows limited self-control, weak treatment plan	4 - Current problem with cigarettes, other addiction or courts due to use, abuse; active with treatment	5 - No current use but recent history of abuse/dependence, adequately aware of risks and seeking help, information, support, treatment to sustain success.	6 – GOAL: Safe use, not smoking or drinking – or Abstinent with self-help groups.



ANOVA

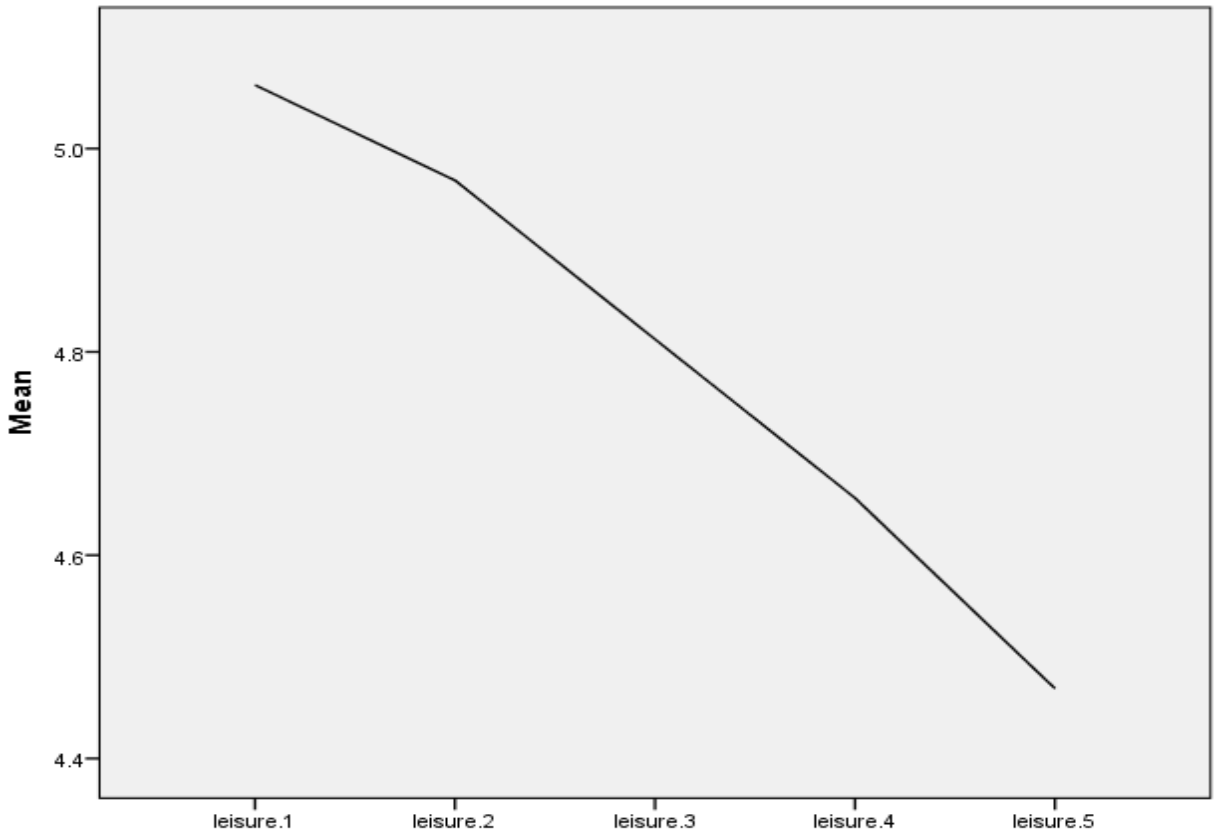
		Sum of Squares	df	Mean Square	F	Sig
Between People		142.980	9	15.887		
Within People	Between Items	1.480	4	.370	.602	.664
	Residual	22.120	36	.614		
	Total	23.600	40	.590		
Total		166.580	49	3.400		

Not Significant

Both independent leisure and use of additional community resources were hampered in the treatment milieu subject population. Goals in these two activities of daily living are as follows:

Enjoy two or more fun and relaxing activities: musical instruments, music, watching/playing sports, reading, computer or board games, cards, art, hobbies, movies, TV?
Use community activities, resources such as after-school sponsored tutoring, clubs, sports, scouts, Boys/Girls Clubs, library, church, dances?

Scores changed minimally over the initial year in day treatment. Lower scores on these 2 ADLs was attributed to increased supervision, services in a single therapeutic community.

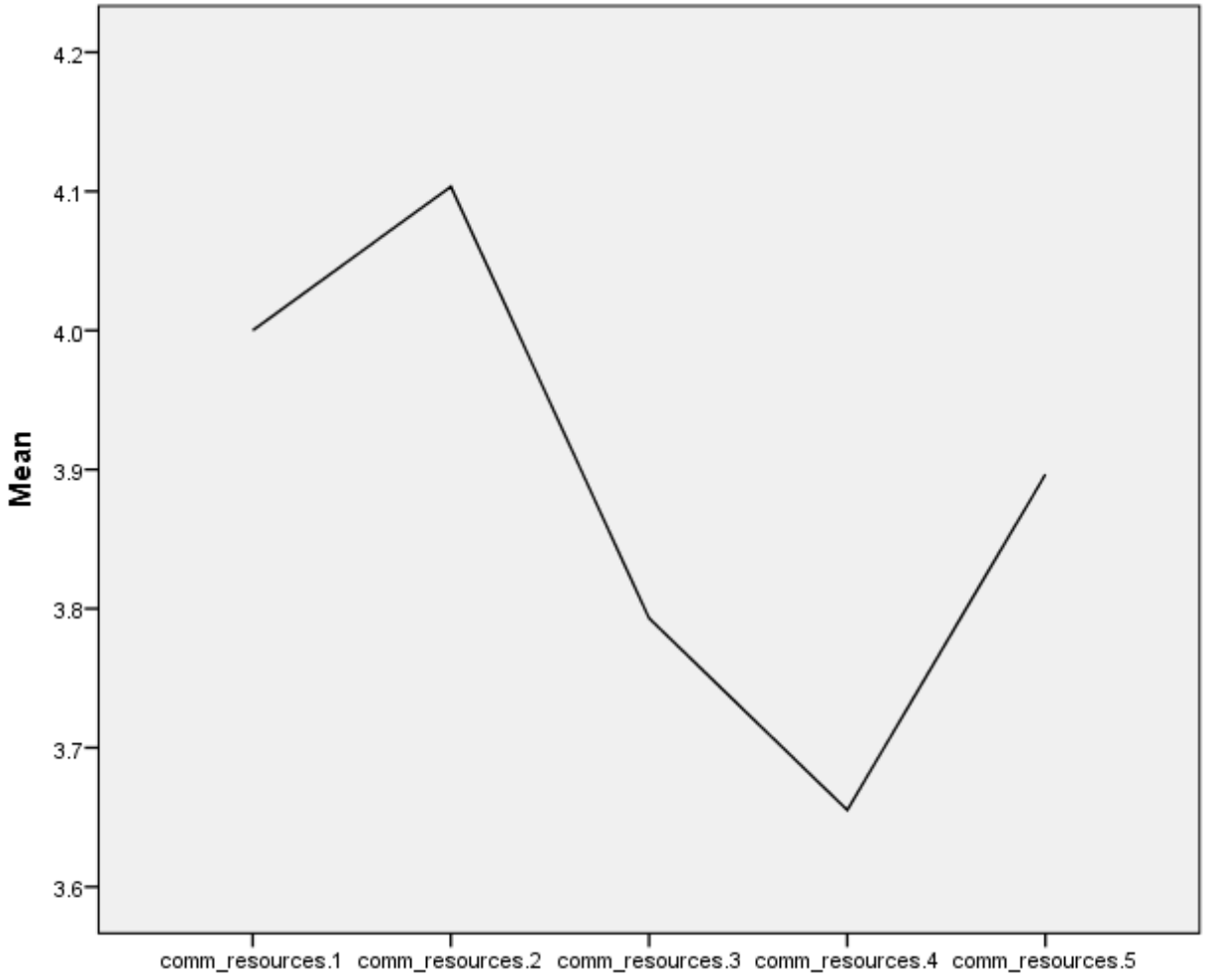


ANOVA

		Sum of Squares	df	Mean Square	F	Sig
Between People		90.994	31	2.935		
Within People	Between Items	7.287	4	1.822	2.093	.086
	Residual	107.912	124	.870		
	Total	115.200	128	.900		
Total		206.194	159	1.297		

Not Significant

While there was no significant change in use of or integrating with other community resources over the first year of treatment, staff refocused efforts in the last six months following a DLA-20 review with MTM Services and began to see progress.



ANOVA

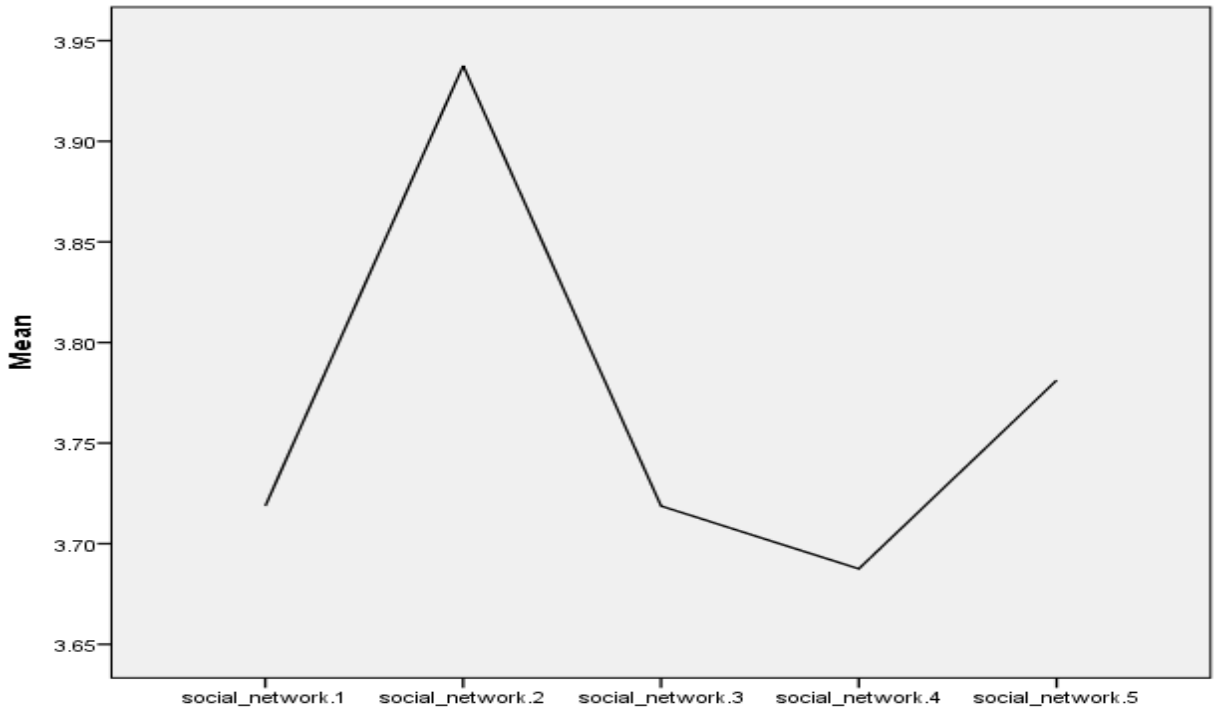
		Sum of Squares	df	Mean Square	F	Sig
Between People		91.834	28	3.280		
Within People	Between Items	3.545	4	.886	.965	.430
	Residual	102.855	112	.918		
	Total	106.400	116	.917		
Total		198.234	144	1.377		

Grand Mean = 3.89

Social network is an important variable for all age youth and all stages of therapy. The definition of "within normal limits" for youth behavior health is the following: *Make and keep same-age friends. Avoid bullying, gangs, cults, anti-social groups.* Mean scores remained in the "serious" behavioral health range for the entire year. Individual youth scores likely hovered around the mean between mid 2s (severe) and low 4s (moderate challenges):

2 - Marked limitations in social network relationships (e.g. excessive dependency or destructive behaviors)	3 - Limited interpersonally, often no significant friendships, socially isolated or avoids and withdraws	4 – GOAL: Marginal functioning with others (i.e. friendships are often minimal, unreliable, strained)

While there was no significant change over the first year of treatment, staff refocused efforts in the last six months following a DLA-20 review with MTM Services.



ANOVA

		Sum of Squares	df	Mean Square	F	Sig
Between People		115.644	31	3.730		
Within People	Between Items	1.287	4	.322	.490	.743
	Residual	81.513	124	.657		
	Total	82.800	128	.647		
Total		198.444	159	1.248		

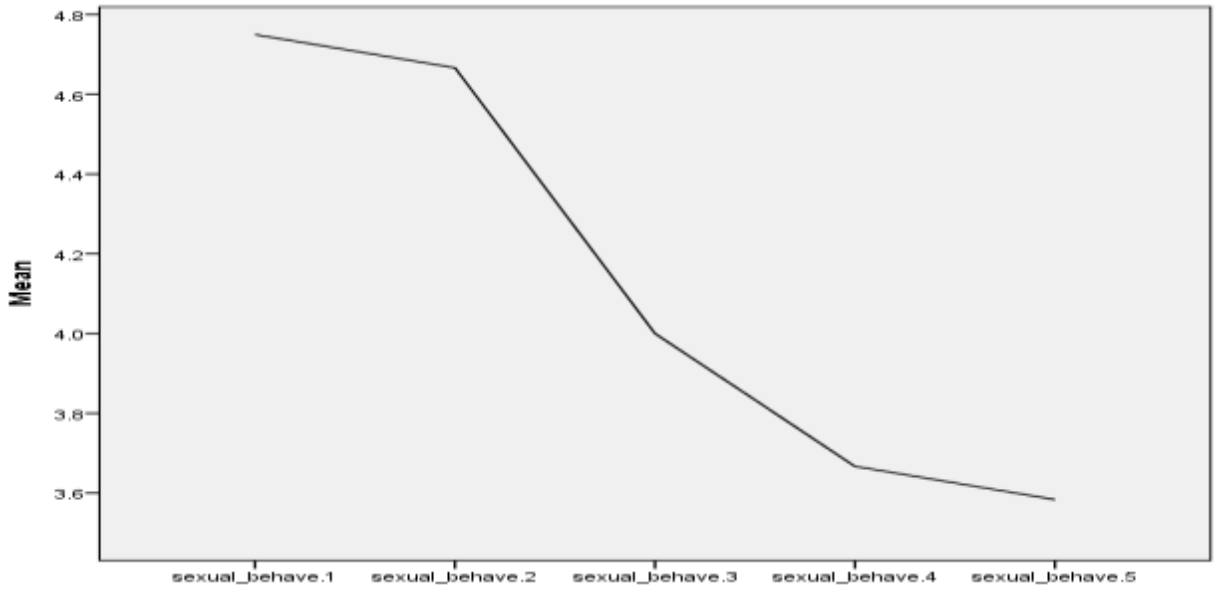
Not Significant

Providers rarely digest the importance of sexual health among SED youth and it is common for programs to miss the sexual identity issues and sexual health of youth under stress of SED. The reliability statistics at the beginning of this report and the graph below indicates accurate measurement of the definition of sexual behavioral health as follows: Reports age-appropriate sexually responsible behaviors with girls/boys. Educated and avoids sexual activities, infections, pregnancy.

Unfortunately, sexual behavioral health functioning scores significantly decreased in 12 months.

2 - Marked limitations in sexual health & self-care, likely prompts extensive level of protective interventions due to high risk to self or others	3 - Behaviors indicate limited sexual health self-care; risk concerns may prompt extra care, interventions, even supervision if risks appear imminent.	4 – GOAL: Marginally sufficient in self-care of sexual heath; minimal understanding of personal or others sexual behavior, issues, inhibitions

Over the repeated measures, the graph and provider report indicated that both staff and youth got more comfortable sharing problems around sexual health. The mean scores are only a snapshot of youth reports of struggling with sexual identity issues, abuse issues.



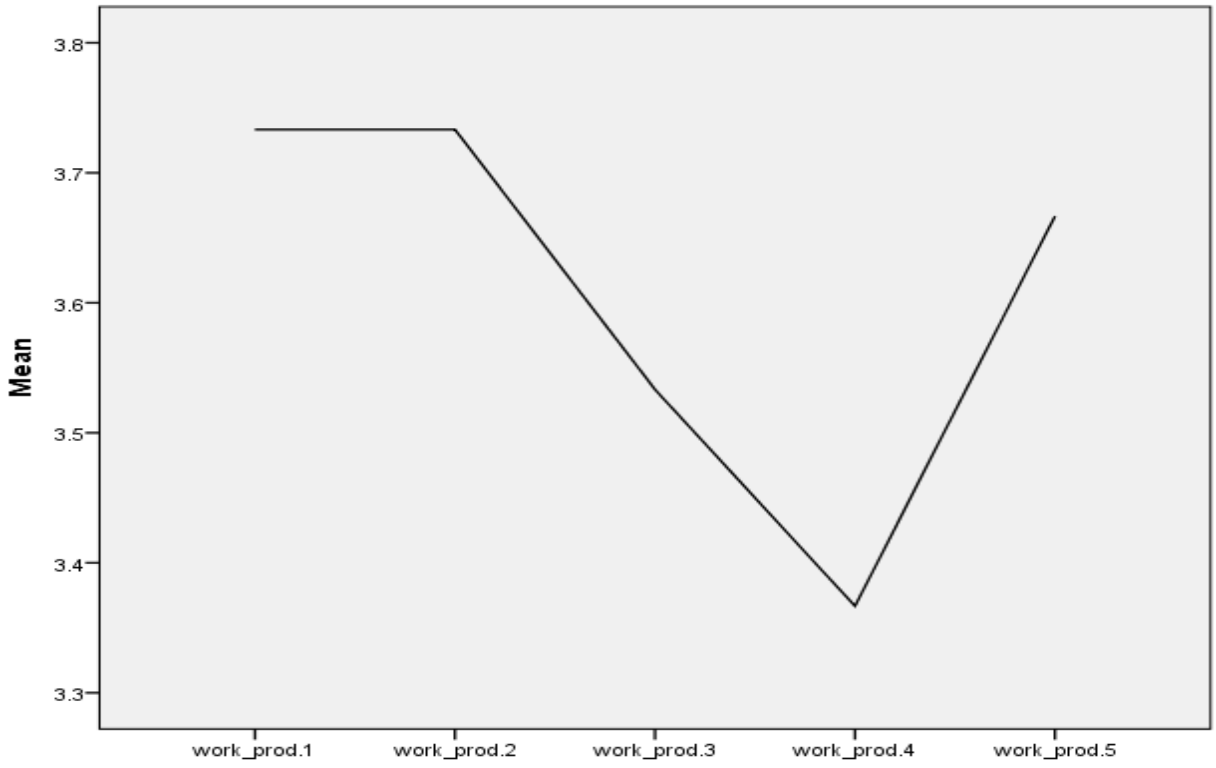
ANOVA

		Sum of Squares	df	Mean Square	F	Sig
Between People		119.733	11	10.885		
Within People	Between Items	14.433	4	3.608	3.895	.009
	Residual	40.767	44	.927		
	Total	55.200	48	1.150		
Total		174.933	59	2.965		

Significantly worse

Learning and grades are the productive work of youth. WNL Goals: *Feel good about performance at school. Consider grades to be good. Complete school projects without undue difficulty. Have vocational goals.* Some of the youth were students in the public school but most were in supervised school settings and their needs coordinated with the intensive day treatment services. While there was no significant change over the first year of treatment, staff refocused efforts in the last six months following a DLA-20 review with MTM Services.

2 - Occasional attempts at productivity unsuccessful; aggressive or does not respond to structure at home or in day activities.	3 - Limited productivity; often with currently restricted capabilities for school, independent employment	4 - Marginal productivity with mental distress (e.g. reduced ability to maintain grade point average with peer group)	5 – GOAL: Moderately functional working in school, independent job, at home; fluctuates with limited skills, experience.



ANOVA

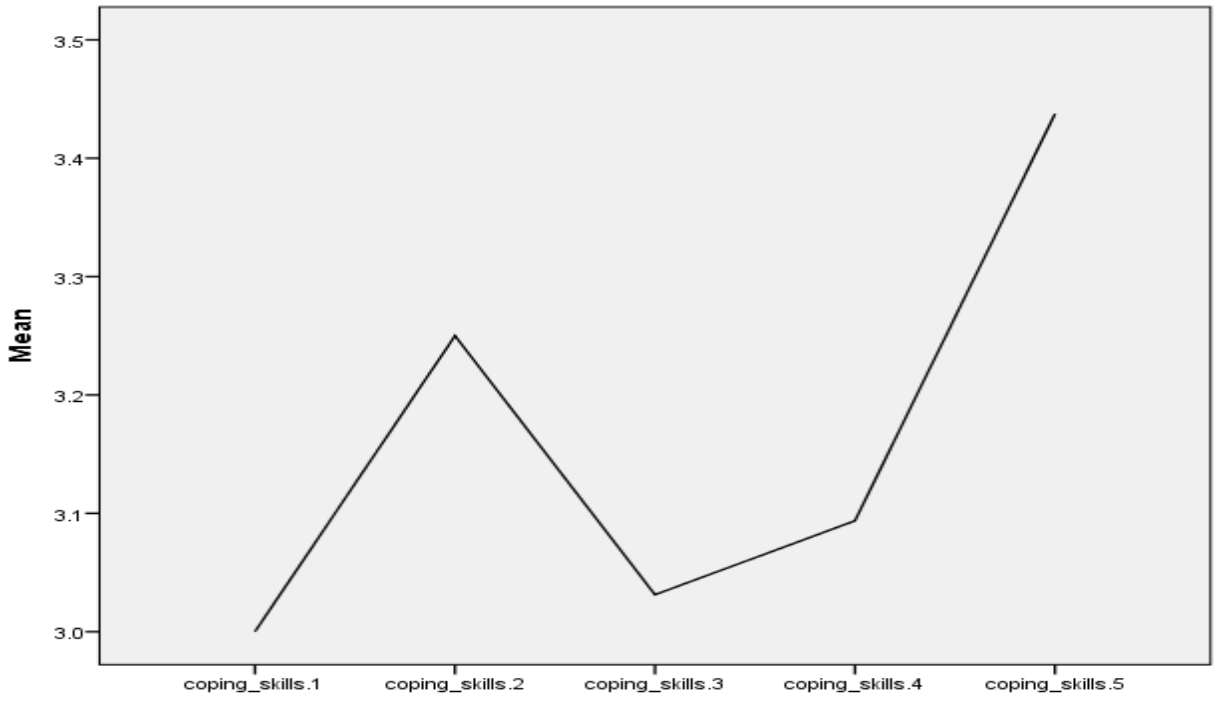
		Sum of Squares	df	Mean Square	F	Sig
Between People		64.193	29	2.214		
Within People	Between Items	2.960	4	.740	1.215	.308
	Residual	70.640	116	.609		
	Total	73.600	120	.613		
Total		137.793	149	.925		

Not Significant

Coping skills were significantly improved at the one-year review but remained in a "seriously impaired" range of scores. Definition of WNL: *Accept adult correction without undue arguing, temper outburst. Tolerates frustration.* SED symptoms, poor communication, housing instability and lack of coping skills were admission criteria.

At the one-year review, communication and coping skills were statistically significant in improved scores.

2- Negative use of coping skills often leading to relapses, crises, involving constant interventions, in or out of protective environment.	3 -Ineffective use of few coping skills prompting regular interventions (e.g. volatile or typically responds negatively to any corrections)	4 - GOAL - Marginally effective knowledge & use of coping actions; needs tx or prompts to create or initiate coping mechanisms.



ANOVA

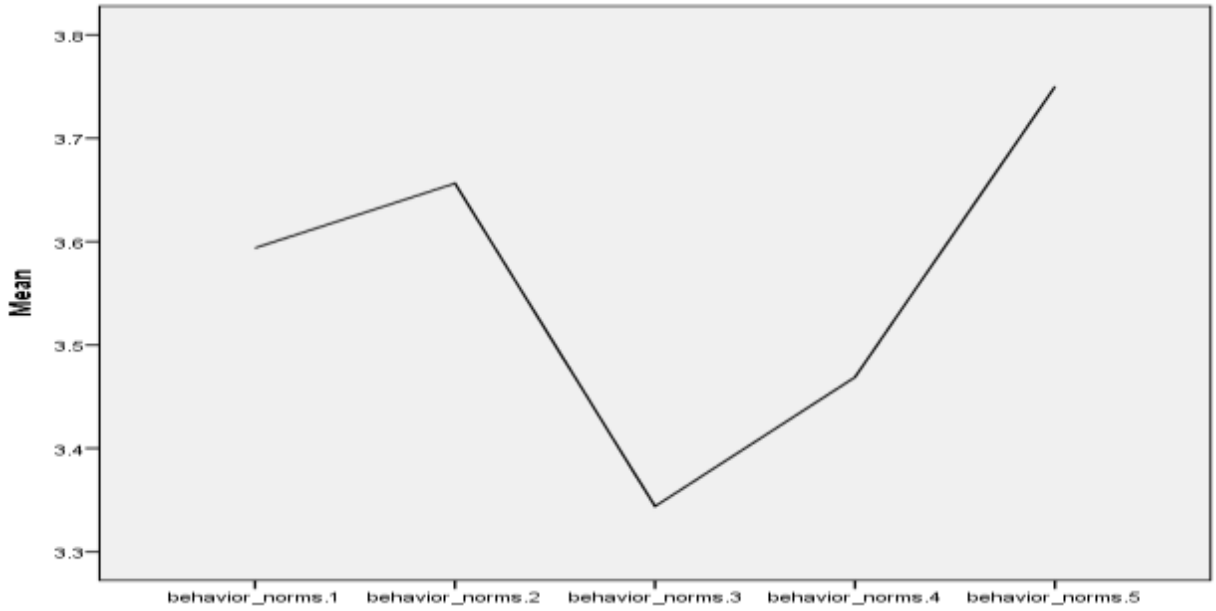
		Sum of Squares	df	Mean Square	F	Sig
Between People		81.775	31	2.638		
Within People	Between Items	4.213	4	1.053	2.522	.044
	Residual	51.787	124	.418		
	Total	56.000	128	.438		
Total		137.775	159	.867		

Significant

In addition to family, behavioral health students may be referred from physicians, courts as well as the public schools. The subject youths' SED symptoms as well as their behavior did not meet community norms. Definition of "within normal limits" behavioral norm ADL is as follows: *Controls threatening or physical expression of anger, violent behavior - either to self or others or property. Law abiding, responsible with school, community rules, driving car.*

2 - Often isolated or demonstrates deviant behaviors, e.g., rejected or belligerent to peers, helpers, neighbors; *may* have serious restrictions by courts/parole.	3 - Limited successful and appropriate interactions, survival level interactions or seriously impaired behaviors, e.g., arrested, restricted by courts/parole	4 -Marginally effective interactions; may receive multiple public system supports in accord with needs; may be compliant with courts/parole;	5 – GOAL: Moderately effective and independent in community interactions; may receive some public support in accord with needs

The mean scores hovered in the "serious" range of scores indicating limited successful adherence to norms. While there was no significant change over the first year of treatment, staff refocused efforts in the last six month after a DLA-20 review with MTM Services.



ANOVA

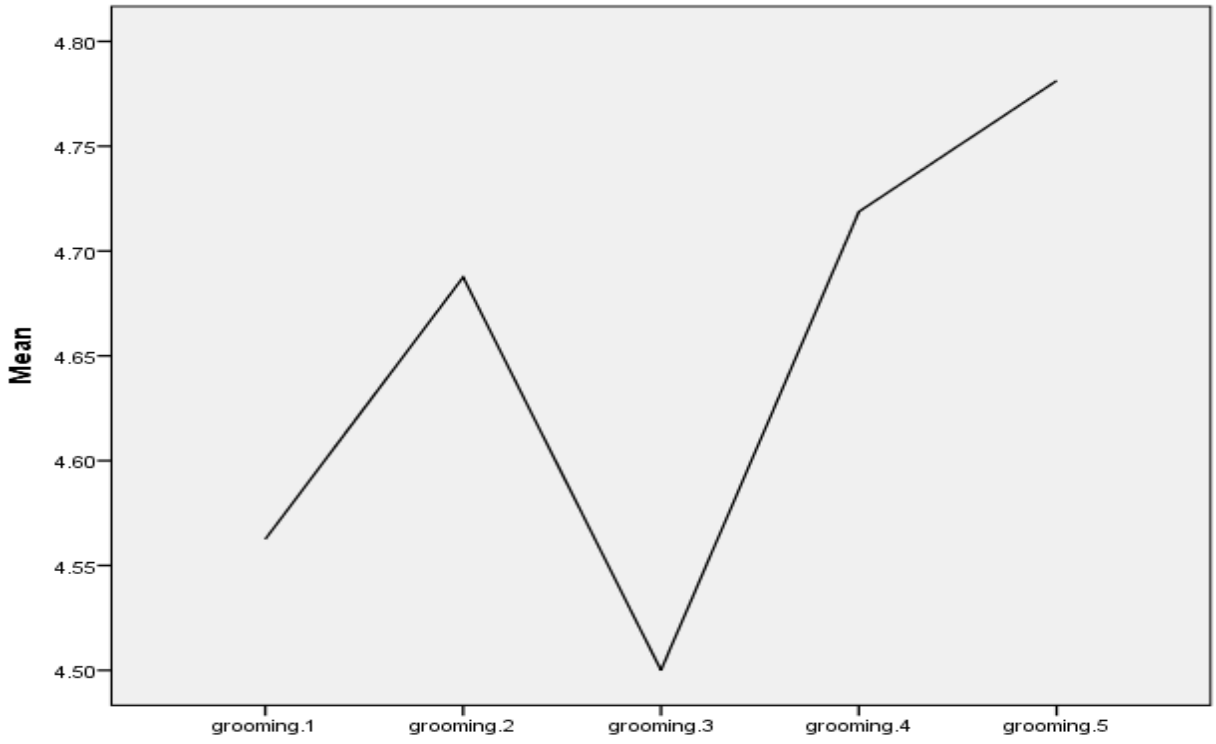
		Sum of Squares	df	Mean Square	F	Sig
Between People		161.775	31	5.219		
Within People	Between Items	3.250	4	.813	1.167	.329
	Residual	86.350	124	.696		
	Total	89.600	128	.700		
Total		251.375	159	1.581		

Not Significant

Providers were glad to see the students independently took steps to care for their personal hygiene and take care of their personal grooming defined as follows: *Assist or manage general appearance: hair, shave, comply with school rules.*

While there was no significant change over the first year of treatment, staff refocused efforts in the last six months following a DLA-20 review with MTM Services.

2 - Marked limitations evident with poorly cleaned hair, hands, self-grooming, very serious needs	3 - Limited self-care in grooming, general observations indicate severe impairments.	4 - Marginally self-sufficient in maintaining adequate grooming -regular assistance.	5 – GOAL Moderately self-sufficient in grooming with prompts or support - routine assistance.



ANOVA

		Sum of Squares	df	Mean Square	F	Sig
Between People		196.575	31	6.341		
Within People	Between Items	4.563	4	1.141	1.855	.123
	Residual	76.238	124	.615		
	Total	80.800	128	.631		
Total		277.375	159	1.744		

Not Significant

Van Treuren, R.R. Using the DLA 20 to Demonstrate Functional Outcomes in a Child and Adolescent Population. The 26th annual Children's Mental Health Research & Policy Conference. Tampa, FL. March 2013.

Oral Presentation: Children's Mental Health Research and Policy Conference

Abstract: (75 Limit) 72

Seven Counties Services uses the Daily Living Activities scale (DLA 20) as a reliable and valid measure of functioning. The DLA 20 assesses functional outcomes that drive clinical practice and program evaluation. Our settings included school, home, community and office based services. Across three independent samples we found significant improvement in functioning regardless of service delivery type. The utility of the Youth Mental Health version of the DLA 20 is effectively demonstrated.

Summary: (750 Limit) 820 (657)

INTRODUCTION: For the past several years we've used the Daily Living Activities scale (DLA 20) to evaluate functional outcomes with our Child and Family clients. The DLA 20 provides a reliable and valid approximation of Axis V GAF scores. Effective outcome measurement must be relevant on two levels: It should inform clinical practice; and be aggregated for program evaluation. Our continuum of care included school, home, community and office based services. Three studies demonstrated the value of the DLA 20 as a programmatic outcome indicator.

METHODOLOGY: We trained all clinicians how to score the DLA 20 ensuring reliability. We used a pre-post design focusing on new clients. DLA 20 scores were measured at intake with the follow-up occurring after a minimum of three continuous months of service (i.e., >= 90 days). Our greatest data challenge was our hybrid electronic and paper medical record. Electronic integration of outcomes should be seamless; however given our limited resources we used paper. This required a system to flag the completed DLA 20 forms and enter the scores into a database. To streamline this process we used Microsoft ACCESS, requiring minimal data entry. The data elements at Time 1 were: Client name, date of intake, initial DLA 20 score and reporting unit code. At follow-up, data entry went quickly by simply adding: The Time 2 DLA 20 score, the follow-up date and reporting unit code. At the end of each fiscal year, these data were downloaded in to Excel, aggregated and ultimately analyzed by program in SPSS.

FINDINGS: The analysis demonstrated significant improvement in functioning across two <u>independent</u> samples. (FY11 N = 576; FY12 N = 861). The FY11 data showed significant increases ($t = -11.629$, $df = 575$, $p < .0001$) for the overall sample. In a separate analysis, these findings held true for all program units except Domestic Violence, which failed to achieve conventional levels of significance. Their data were included in our overall child and family sample. In FY12 we replicated these results ($t = -17.585$, $df = 860$, $p < .0001$). Functioning increased in all programs across the spectrum of services with the exception of our DV program (DV: $t = -1.732$, $df = 41$, $p < .091$). In our third study, we obtained a sample of children's crisis services which are shorter in duration (averaging 67 days) and more intensive. The full score and three pre-determined DLA 20 factors (Safety, Coping and Behavior Norms) were analyzed

separately. All analyses showed significant improvements in functioning. (Full score: t = -7.222, df 38, p < .0001).

DISCUSSION: A DLA 20 score of 50 indicates a break point where most daily living activities are within normal limits. This prompts the clinician to initiate less intensive services and begin discharge planning. Across both years we consistently found that the time 1 and time 2 average scores were in this range moving from mid 40's to mid 50's. Over the past two years, replication with independent samples demonstrate that the Youth Mental Health version of the DLA 20 is sensitive for use across a broad continuum of care, even when using a wide range of trained clinical raters and serving a diverse child and family population.

Regarding our DV data, we reasoned that the nature of violence and abuse issues require a longer term treatment protocol which may not yield significant change in functioning in the early stages of therapy. While not significant, for both years the trend was in a positive direction.

The results were formally written and distributed to our division leadership and supervisors to share with program staff. We also distributed our findings to Community Partners (e.g. Public Schools, DCBS, etc.). Our next step is working with community stakeholders to integrate their outcome indicators (e.g., grades, truancy, etc.) with the DLA 20. Taken together, these three studies demonstrate that the DLA 20 is an effective indicator of functional outcomes for Child and Family programs regardless of service delivery setting.

ADDITIONAL 500 WORD SUMMARY: 466

For the past several years we've used the Daily Living Activities scale (DLA 20) to evaluate functional outcomes with our Child and Family clients. The DLA 20 provides a reliable and valid approximation of Axis V GAF scores. Effective outcome measurement must be relevant on two levels: It should inform clinical practice; and be aggregated for program evaluation. Our continuum of care included school, home, community and office based services. We trained all clinicians how to score the DLA 20 ensuring reliability. We used a pre-post design focusing on new clients. DLA 20 scores were measured at intake with the follow-up occurring after a minimum of three continuous months of service (i.e., >= 90 days). The analysis demonstrated significant improvement in functioning across two <u>independent</u> samples. (FY11 N = 576; FY12 N = 861). The FY11 data showed significant increases (t = -11.629, df = 575, p < .0001) for the overall sample. In a separate analysis, these findings held true for all program units except Domestic Violence, which failed to achieve conventional levels of significance. Their data were included in our overall child and family sample. In FY12 we replicated these results (t = -17.585, df = 860, p < .0001). Functioning increased in all programs across the spectrum of services with the exception of our DV program (DV: t = -1.732, df = 41, p < .091). In our third study, we obtained a sample of children's crisis services which are shorter in duration (averaging 67 days) and more intensive. The full score and three pre-determined DLA 20 factors (Safety, Coping and Behavior Norms) were analyzed separately. All analyses showed significant improvements in functioning. (Full score: t = -7.222, df 38, p < .0001).

A DLA 20 score of 50 indicates a break point where most daily living activities are within normal limits. This prompts the clinician to initiate less intensive services and begin discharge planning. Across both years we consistently found that the time 1 and time 2 average scores were in this range moving from mid 40's to mid 50's. Over the past two years, replication with independent samples demonstrate that the Youth Mental Health version of the DLA 20 is sensitive for use

across a broad continuum of care, even when using a wide range of trained clinical raters and serving a diverse child and family population.

Regarding our DV data, we reasoned that the nature of violence and abuse issues require a longer term treatment protocol which may not yield significant change in functioning in the early stages of therapy. While not significant, for both years the trend was in a positive direction.

Taken together, these three studies demonstrate that the DLA 20 is an effective indicator of functional outcomes for Child and Family programs regardless of service delivery setting.

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CHILD AND FAMILY SERVICES

Seven Counties Services, Inc.
Outcome Initiative: DLA 20

Prepared by: Ron Van Treuren, Ph.D. and
Keneysha Rodney, BSW
(Shared with W.Presmanes, MTM Services, by permission)

Executive Summary

- We used the DLA 20 as part of our comprehensive outcomes initiative during FY11-FY12.[1]
- Eight reporting units within our division participated in this study. They are: School Based Services; Brief Treatment Unit; South Child and Family; South Transitions; Acute Child Psychiatric Services (Acute), Family Recovery Program, First in Care, Family Preservation Program/CCC, Western Day Treatment and Waller.
- 861 clients participated in the overall pre-post analysis. This effectively increased our sample size by 285 clients over last year (FY11). Both samples from FY11 and FY12 were independent. DLA 20 total scores were measured at intake (Time 1) and again during the months of May and June (Time 2). The minimum dosage of service was three months.
- In addition we analyzed data from our Acute program (N = 39) separately[2] due to their briefer intervention period. Average length of service for the Acute sample was 67.33 days.
- Average scores by program were within the predicted range for our population (mid to upper 40's at Time 1, and mid to lower 50's at Time 2). This replicates data from last year's independent sample of Child and Family clients.
- There was a significant increase in the overall DLA 20 score in Child and Family clients from Time 1 to Time 2. This also replicates last year's result.
- Individual program averages showed similar results. All reporting units showed increases in average DLA 20 scores during FY12, with 7 out of 8 rising to the level of statistical significance. Acute data also showed a significant improvement in DLA 2o scores.

With our commitment to quality services, the Child and Family Division of Seven Counties Services, Inc., undertook an outcome initiative which examined functioning across the spectrum of our continuum of care. We previously measured outcomes in a variety of ways that were program specific. We measured symptoms like anxiety and depression. We used instruments like the Child Behavior Checklist (CBCL) and various mood inventories. We measured variables like time to first appoint, hospitalization and children at risk of removal remaining in the home. We valued consumer input using various consumer satisfaction and required state surveys like the Youth Services Survey (YSS – F). While all of these indicators have merit, they: 1. Are not

[1] The Daily Living Activities – 20 item scale is a functional assessment developed by Willa Presmenas, M.Ed. and standardized with the majority of populations we serve. There are four versions; Adult, Youth, MRDD and Substance Abuse. These data focused on our use of the Youth version.

[2] Acute works shorter term and did not necessarily have the minimum of three months of service pre-post.

exhaustive in their ability to assess outcomes, 2. May cost money per application and require a specialized license to administer, 3. Were not implemented consistently and spread widely across the division and 4. All lacked sufficient electronic means of capturing and analyzing the data across programs. Most of these efforts were useful on the individual treatment planning level but had little or no utility in aggregating across programs. This was due, in part, to the limitations of a paper based system and lack of consistent application across the continuum of care.

This initiative differs in that we took a simple instrument that had demonstrated validity and reliability, the DLA 20. We trained staff at our various sites during FY12. We developed a comprehensive "database" approach to capture the data. By using the DLA 20 we focused on "functional" improvements which are basic and simple to understand. This led to our ability to compile these data across programs and build an analyzable database of 861 clients.[3]

There were limitations. The DLA 20, although required in our clinical assessment, is not integrated into our Electronic Health Record. It must be completed on paper then scored manually. While scores eventually find their way into our system[4] there are significant current obstacles that prevent us from obtaining usable data.

DLA 20 scores must be entered into a database that stores the data in an easily retrievable way. We chose Microsoft Access to accomplish this. This initially presented its own set of challenges which were not insurmountable, but required planning and monitoring. FY11 was a time to study the process of data collection and administration as much as the DLA 20 data itself. The knowledge we gained last fiscal year improved the process for our initiative in FY12. One of the additions to the database was the inclusion of a date of administration field.

Method

We used an Access database specifically designed to capture DLA 20 data at two points in time.[5] Data stored in this way lends itself easily to transfer to programs like Excel or ultimately SPSS.[6] The DLA 20 has twenty individual Daily Living Activity items, for example Health Practices, Behavior Norms, Problem Solving and Family Relationships. We've included a complete list in Appendix A. Although it is not integrated into our current EHR it is integrated into our assessment process and covers most areas on our bio-psycho-social evaluation. The DLA 20 has demonstrated good reliability and validity with trained professionals. It has a national reputation for use in community mental health centers and was adopted by our SCS Board of Directors as an indicator of our programmatic success.

Due to specific challenges in data collection and methodology, we focused on intakes primarily completed during the fall of 2011 as our Time 1 measure. The DLA 20 is an integral part of our evaluation process and is collected at intake on all clients. Our follow up Time 2 DLA 20 indicator was collected primarily during the months of May and June of 2012. The minimum

[3] The independent sample for FY11 was 576.

[4] The DLA 20 approximates Axis V in our diagnostic system and is eventually added to our record via a Client Assessment Summary (CAS) update. Problems exist in the retrieval of that information in a usable form.

[5] The Access Database focused specifically on collecting DLA 20 scores, but we also expanded it to include other indicators such as the GAIN – Q, BASC and the NCFAS. In most cases there wasn't sufficient data in these other fields to do meaningful analysis at this time.

[6] Access and Excel are Microsoft products. SPSS refers to Statistical Package for the Social Sciences, which we use under license. SPSS allows for a high level of analysis to determine levels of significance between groups of data.

dosage of service was three months. Any new client who received an intake and did not have at least three months of service before the follow up was excluded from these data. This excludes clients who had intakes after January 31, 2011 as well as clients who dropped out of treatment prior to three months of service. The guiding principal was to "keep it clear and keep it simple" so that we would have data to analyze and be able to review the process.

Training

There was a training component with this initiative. Seven Counties' orientation practices require all new staff to complete and online training covering the basics of the DLA 20. This is further reinforced in supervision; however this is not necessarily sufficient to ensure adequate reliability. The training outlines 5 specific steps, or decision rules, that must be followed for consistency of administration. Additional refresher training was available by request for each site participating in the study. The training stressed the importance of using the DLA 20 to guide treatment planning, outlined the 5 decision rules for reliability, explained the outcome initiative for FY11 and answered specific staff questions regarding the instrument.

Results

Table 1.

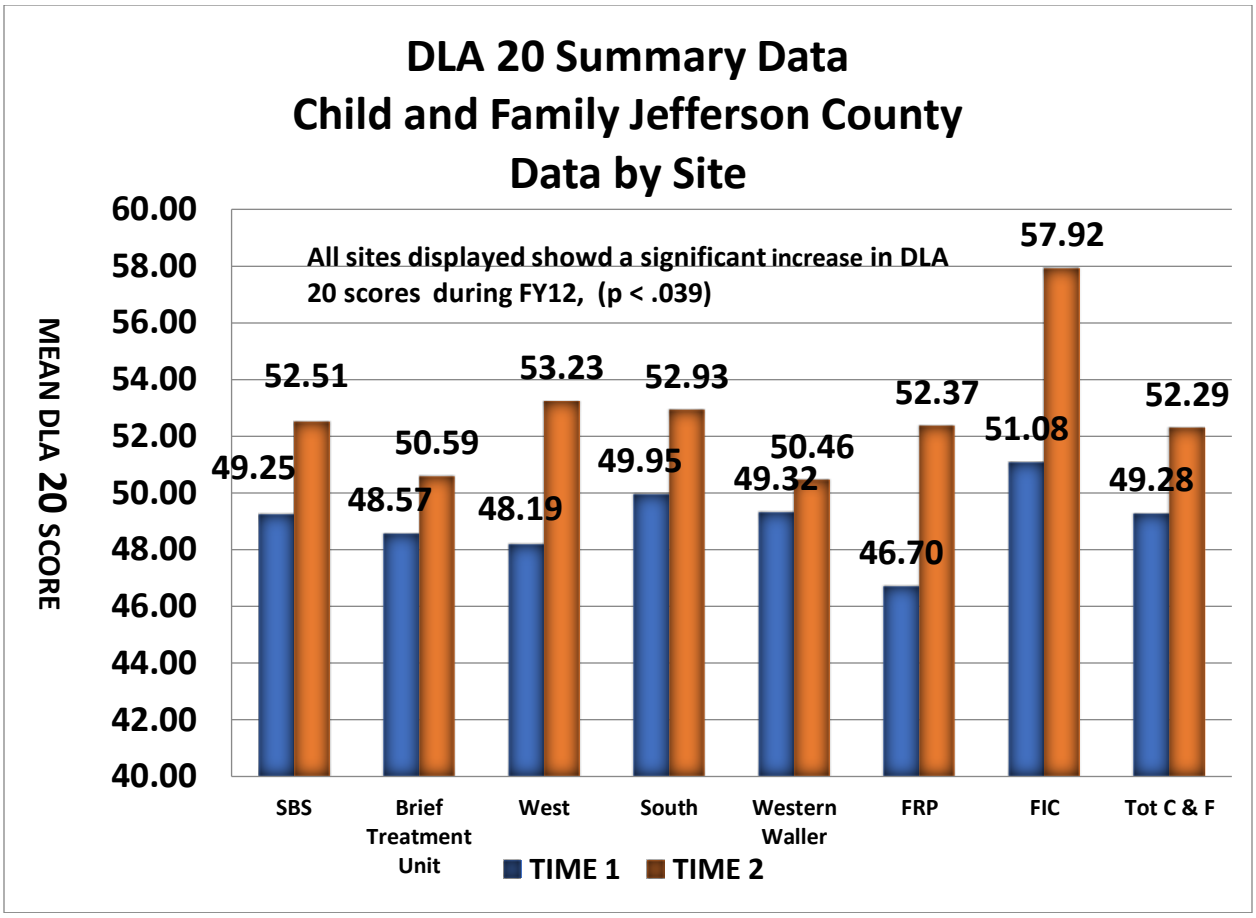
STATISTICAL RESULTS	MEAN T1	MEAN T2	N	ST DEV T1	ST DEV T2	t Score	df	Sig (2-tailed)
SBS	49.25	52.51	303	5.78	5.44	-12.153	302	p < .0001
Brief Treatment Unit	48.57	50.59	37	6.75	7.03	-2.145	36	p = .039
WEST	48.19	53.23	69	6.36	6.40	-4.758	68	p < .0001
BHS SOUTH	49.95	52.93	86	6.19	6.86	-4.613	85	p < .0001
TRANS SOUTH	49.95	50.95	42	7.51	9.04	-1.732	41	p = .091
Western Waller	49.32	50.46	111	7.06	6.03	-2.281	110	p = .025
First In Care	51.08	57.92	24	5.07	7.68	-4.232	23	p < .0001
Family Recovery Program	46.71	52.37	189	8.77	7.08	-12.973	188	P < .0001
TOTAL C and F	**48.71**	**52.30**	**861**	**6.57**	**6.19**	**-17.585**	**860**	**p < .0001**

These data were compiled across our division which allowed for analysis of individual site performance and aggregate division performance. Table 1 shows the results of the Paired Sample t- test with means and total N. Our division sample included 861 clients. We were able to demonstrate that across a wide spectrum of services on our continuum of care, consumers showed a significant increase in DLA 20 scores from Time 1 to Time 2. ($t = -17.585$, $df = 860$, $p < .0001$)

The table also shows the breakdown by sites included in the sample. In seven out of eight sites, DLA 20 scores reached an acceptable level of significance. [7] The mean differences are presented in Graph 1. Only sites that achieved a significant difference are displayed.

Graph 1.

[7] All sites that collected data were included. The site where significance was not achieved is also included in our Total Child and Family analysis. Next year we hope to expand this to sites and programs that had difficulty with data collection and data entry into Access.



Acute Child Psychiatric Services

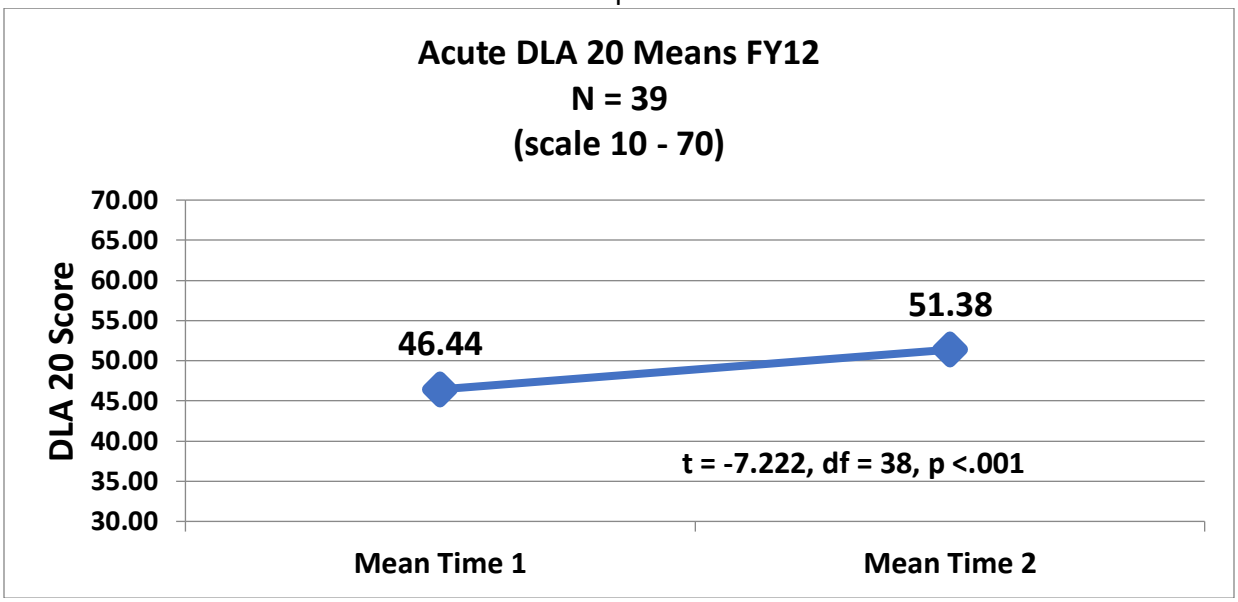
Data collected within our Acute Child Psychiatric Services (Acute) program was analyzed separately due to the crisis oriented shorter term nature of their work. Their model provides a more intensive service array for a briefer period of time. Their goal is to stabilize the acute crisis with a family based intervention and avert hospitalization if possible. We utilized the same pre-post design with shorter intervals between time 1 and time 2.

In addition to the overall DLA 20 score, our Acute unit chose to do an Item Analysis on three individual factors of the DLA 20: Safety; Behavior Norms; and Coping. These three factors were chosen before data collection began because they were particularly representative of the issues their clientele faced. Acute had a small sample (39). The data and analysis are presented below.

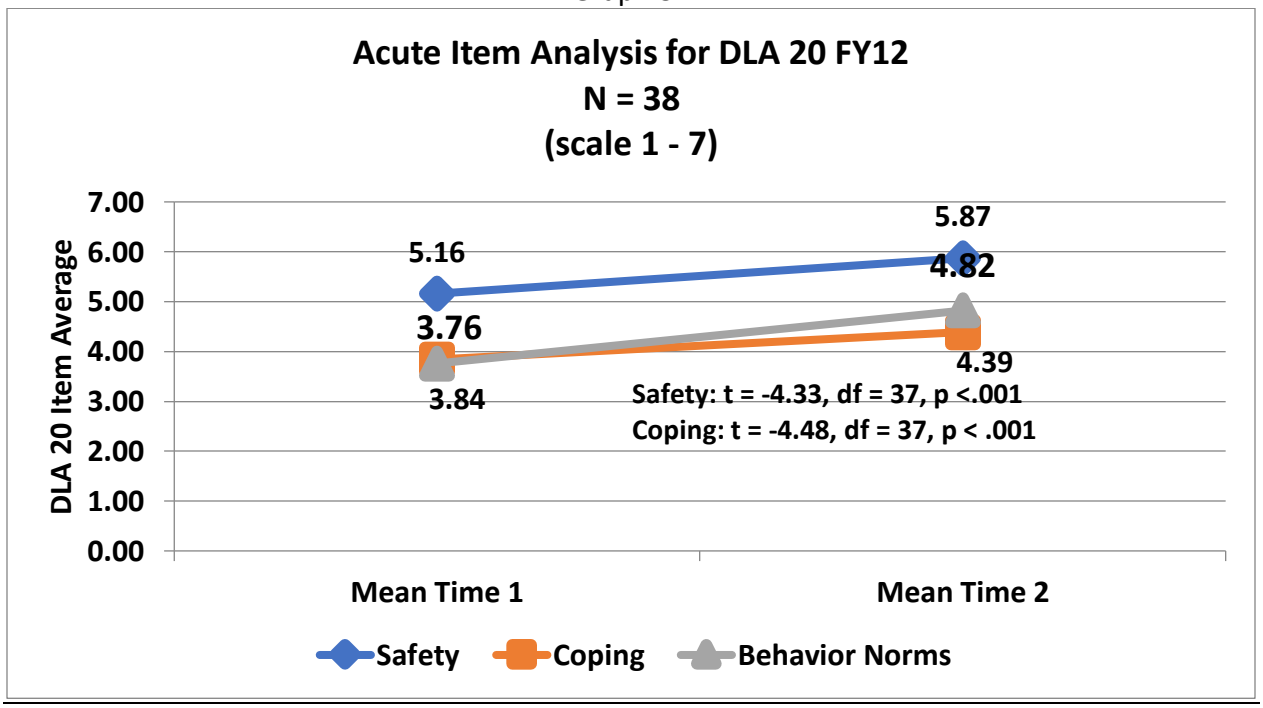
Acute Data	Mean Time 1	Mean Time 2	N	ST DEV T1	ST DEV T2	t Score	df	Sig (2-tailed)
Safety	5.16	5.87	38	1.48	1.26	-4.332	37	p < .0001
Coping	3.84	4.39	38	0.92	1.00	-4.480	37	p < .0001
Behavior Norms	3.76	4.82	38	1.00	1.11	-6.100	37	p < .0001
Acute Total	46.44	51.38	39	5.62	7.47	-7.222	38	p < .0001

The following graphs further illustrate their data.

Graph 2.



Graph 3.



Discussion

The DLA 20 measures functioning across 20 activities of daily living. It is meant to be a comprehensive snapshot of functioning within the 30 day period prior to administration. As such, it gives an overview of functioning in areas both within normal limits and areas outside of normal limits. These areas outside normal limits become the focus of treatment. It should be

noted that this fits nicely with our assessment of strengths and weaknesses as we begin our work with consumers.

Our sample came from a child and adolescent population who presented themselves for assessment through our Open Access system. That is, families called our centralized phone number and were given information of our programs that matched their specific need and location options. We have 5 separate facilities regionally located and families simply "walked in" and were seen for assessment that day. That comprised our Time 1 measure. In addition we serve 115 schools across our region as well as provide in-home community based services. Their intake assessments were also included in our Time 1 measure.

The DLA 20 is not an indicator of "pathology" but it does give an approximation of the Axis V assessment of functioning, which is part of the diagnosis process according to the DSM IV.[8] As we saw in last year's data, the mean scores presented in the above table are within the predicted range for our population. That is, *scores in the 41–50 range indicates serious symptoms or functional impairment (not within normal limits) and scores of 51-60 indicate movement toward short-term treatment and discharge planning (functioning within normal limits)*. This finding has proved to be extremely stable across data sets and independent samples from year to year as we've used the DLA 20 with a child and adolescent population. The measurement across our continuum of care shows the versatility of using a functioning indicator to measure change. The service array in our sample depicts the variety of service delivery options within our population. School based services included both our efforts with elementary, middle and high schools, as well as services to more specialized populations within our day treatment and alternative school focus. More traditional outpatient services were represented regionally with our South, West and east end Brief Treatment Unit sites. Home based services are represented in the Family Recovery Program (FRP) data. Additional community based services are represented with our Family Preservation Program (FPP). Assessment services included the First In Care (FIC) initiative with DCBS. Specialized trauma focused treatment included our Transitions South team. In all cases, mean DLA 20 scores at Time 2 were higher than Time 1. Statistical analysis showed significant differences in eight out of the nine services presented (including Acute). The exception was Transitions at the South site which showed an increase similar to the other samples but was marginal at $p = .091$ not rising to the level of statistical significance.[9]

Acute data were analyzed separately due to the shorter term nature of their work. While in our general dataset we required a minimum of three months service (or 90 days), our dataset from Acute averaged 67.33 days of service. This is the first time we've looked at data with this short time interval. The DLA 20 is generally more sensitive to changes during longer timeframes, typically being between 3 to 6 months of service. Before we collected data, Acute decided to do an item analysis on three of the factors that seemed relevant to their population. These factors were Safety, Behavior Norms and Coping. Both the item analysis and the overall DLA 20 score yielded significant improvement in functioning. Concerns about the lack of sensitivity

[8] Diagnostic and Statistical Manual, IV edition, copyrighted by the American Psychiatric Association. The DSM IV is the standard means of diagnosis within our field.

[9] Conventional levels of statistical significance would be $p < .05$. That is, chance results would occur less than 5 times out of 100.

with this population were unwarranted. This is perhaps due to the rapid change evident in doing crisis work. When crises stabilize clients often can show dramatic improvement, even when there is still significant work to do regarding the precipitating events.

Conclusion

In conclusion, several findings are worth noting.

- Two large independent samples using the Youth version of the DLA 20 showed that the instrument is robust yielding consistent results from year to year.[10]
    - Different programs across our service array (office based, community based, school based, etc.) showed increases' averaging from time 1 scores in the 40's to time 2 scores in the 50's. That is, children within these programs demonstrated significant increases in functioning across the 20 daily living activities within the first 3 to 6 months of service from the initial assessment. While the increases look slight, the power of statistical analysis shows that these increases were not due to chance factors.
    - We also found significant increases within our Acute services, which focus on children and families in crisis. The objective of Acute services is to maintain children in the community and divert automatic hospitalization. As such, they provide immediate intensive services to children and families on a short term basis. Significant increases in function are consistent with our mission.
- One of our Transitions units participated in this study. Transitions is a specialized service that focuses on abuse and domestic violence issues in a family based intervention model. Change often comes slowly within this population. While the sample size was small (42) we found marginal results ($p < .091$) in the predicted direction. Perhaps a longer follow up period is necessary to demonstrate significant improvement in functioning, especially from the intake assessment forward. It is noteworthy that the observed change with the DLA 20 was positive and in the predicted direction.

All in all, we are pleased with the results of this effort to measure functional change across our division's continuum of care. It is encouraging replicate findings with two large independent samples. This is difficult work and these data pay a small tribute to the success of our programs and staff. The hard work is done by our clients. Our next steps include continuing to refine our data collection and analysis process. We've built in options to enhance DLA 20 ratings with other established instruments. Some are required for specific programs like the NCFAS[11]. With a larger sample of these other measures we can paint a more powerful picture of the outcomes within our division.

We would also like to open more formal data sharing with community partners. For example, Jefferson County Public Schools have a vested interest in the children we serve. It would be advantageous for all if we could include academic performance, attendance and suspension data in our analysis. HIPPA and FERPA regulations allow for data exchange. We need to find acceptable ways to make this happen. Our partners at DCBS also have a vested interest in not

[10] Sample for FY11 = 576. Sample for FY12 = 861. All new clients entered services through our Open Access process.
[11] The NCFAS is the North Carolina Family Assessment Survey.

only maintaining our children within our community but ensuring that they have the skills to lead productive satisfying lives. Our data from the DLA 20 lends support to this.
Finally, with the advent our next generation of Electronic Health Record, a more seamless integration of data collection is possible. We continue to advocate for this. Outcomes are a vital part of the treatment process. We support this effort and look for improvements in this area.
Thank you to all the staff and clients who made this effort possible.

Appendix A.

Daily Living Activities (20):

1. Health Practices
2. Housing Stability & Maintenance
3. Communication
4. Safety
5. Managing Time
6. Managing Money
7. Nutrition
8. Problem Solving
9. Family Relationships
10. Alcohol/Drug Use (including Cigarettes)
11. Leisure
12. Community Resources
13. Social Network
14. Sexuality
15. Productivity
16. Coping Skills
17. Behavior Norms
18. Personal Care, Hygiene
19. Grooming
20. Dress