

**Foothills Academy: A Program Ranking
And Comparative Analysis of
Residential Treatment Programs**

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I. EXECUTIVE SUMMARY

The Foothills Academy is an all male adolescent residential treatment facility in Albany, Kentucky. As more states turn toward alternative treatment options to address the growing needs of youth suffering from mental and emotional disorders and substance abuse issues, demand for more efficient treatment programs is on the rise. To remain competitive and to administer the best treatment services for their clients, residential treatment programs must utilize industry best practices that allow efficient use of public funds. By identifying high performing programs, those programs may then be studied to identify factors key to individual program success.

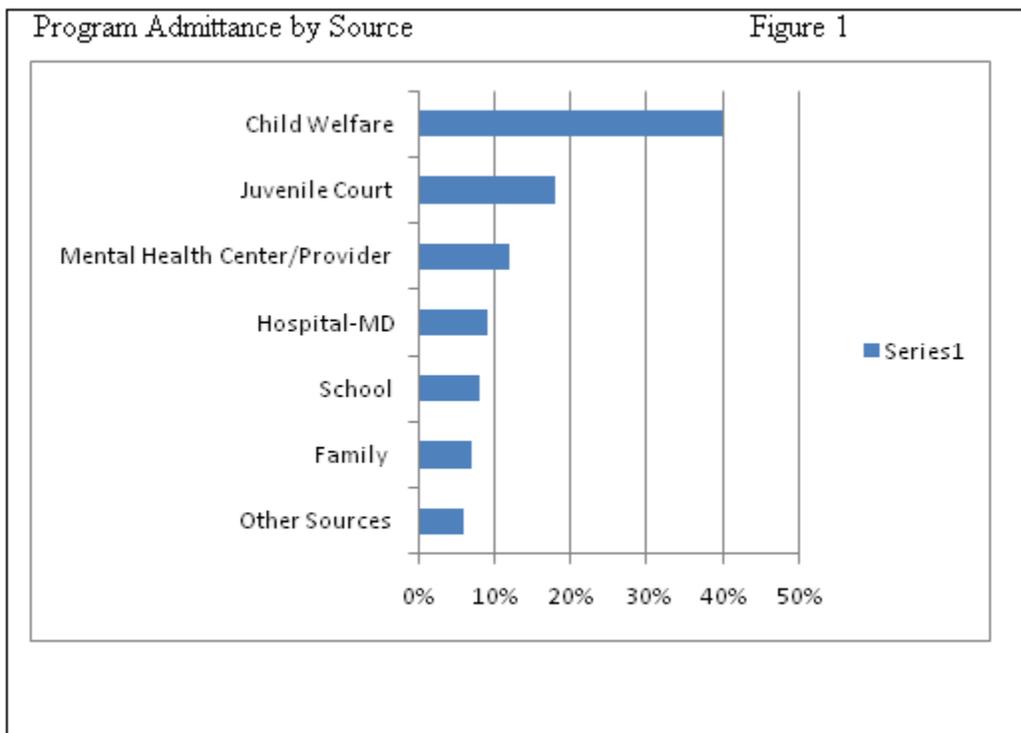
My findings were consistently statistically insignificant, as each examined trait was found not to have a causal relationship with program success as defined. Further study is needed to identify factors affecting residential youth treatment programs.

II. Identification of Research Issue.

The Surgeon General suggests that as much as 20 percent of the United States' youth are considered at risk or have already been diagnosed as having a mental, emotional, or substance abuse disorder (DHHS, 1999). These disorders include depression, bipolar tendencies, schizophrenia, general psychoses, anxiety, and eating disorders which all can be co-occurring with substance abuse. Authorities also go on to theorize that a majority of those 20 percent will suffer functional impairment as a result of their illness (NIMH, 2007). The National Institute of Mental Health projects that at least half of those 20 percent diagnosed will suffer significant impairment—which is defined as disruptive behavior patterns that will interfere with home, school, social, and community life (NIMH, 2007). The National Center for Children in Poverty reported in 2006 that 5 to 9 percent of youth have some type of severe functional impairment with their ability to interact with others in their community and peers (Masi and Cooper, 2006). These behavior problems can lead to higher levels of aggression and confrontation that can prevent the development of healthy relationships and further socialization with family, friends, and community members (Isett et al. in McCurdy, 1980). More disturbing is the link between these disorders and suicide, as discussed in the national Youth Risk Behavior Survey, which looked at suicide and attempted suicides for a 12-month period for high school students (Nemours Foundation, 2008).

Youth who do not receive the treatment that they need are likely to suffer from “clinical deterioration and dysfunction” that escalates the current disorder—which in turn can cause further damage to the patient and their family and friends, increase further interaction with the social/juvenile systems, and ultimately lead to adult criminal activity (DHHS, 2003). Three general guidelines warrant admission to a residential treatment center, (McCurdy, 2004): 1)

patient is at risk of self injury, (2) patient is at risk of physical aggression and harm to others in community, and (3) patient is capable of disruptive and destructive actions in the communities in which they live. The residential treatment program that the patient is enrolled in then begins the assessment process to identify the patient’s needs. Ultimately the staff clinician and therapy team create a tailored treatment that will best address that patient’s needs. Treatment regimes often (DHHS, 2003) include substance abuse counseling, individual and group counseling, and behavioral management.



As seen in (Figure 1), admittance into these programs can come from a variety of sources, but primarily through social service program interventions. It is within the case worker’s discretion to place the patient in the program best suited and able to address the patient’s needs. As residential treatments begin to grow as an industry (Kott, 2010), case workers have the ability to “shop” treatment centers with open beds to see which treatment centers might be best capable of

addressing their clients' needs. Residential treatment programs now must compete to keep their beds full and operate at a capacity range. In this competitive market, it will be an advantage to be able to demonstrate a performance edge in program success as well as demonstrating maximal outputs for public dollars invested.

III. RESEARCH QUESTION

Where does the Foothills Academy fall in the performance spectrum of residential treatment facilities in Kentucky? Foothills Academy will be compared with other nonprofit residential treatment centers in Kentucky to find each program's success rates based upon averages of performance for one year. After completing this ranking, the research will then try to find a common set of factors that might explain the success rates of the individual programs. Indicators for those factors include:

- ratio of patient to staff
- staff percentage of licensed clinician
- patient loads
- average successful treatment time

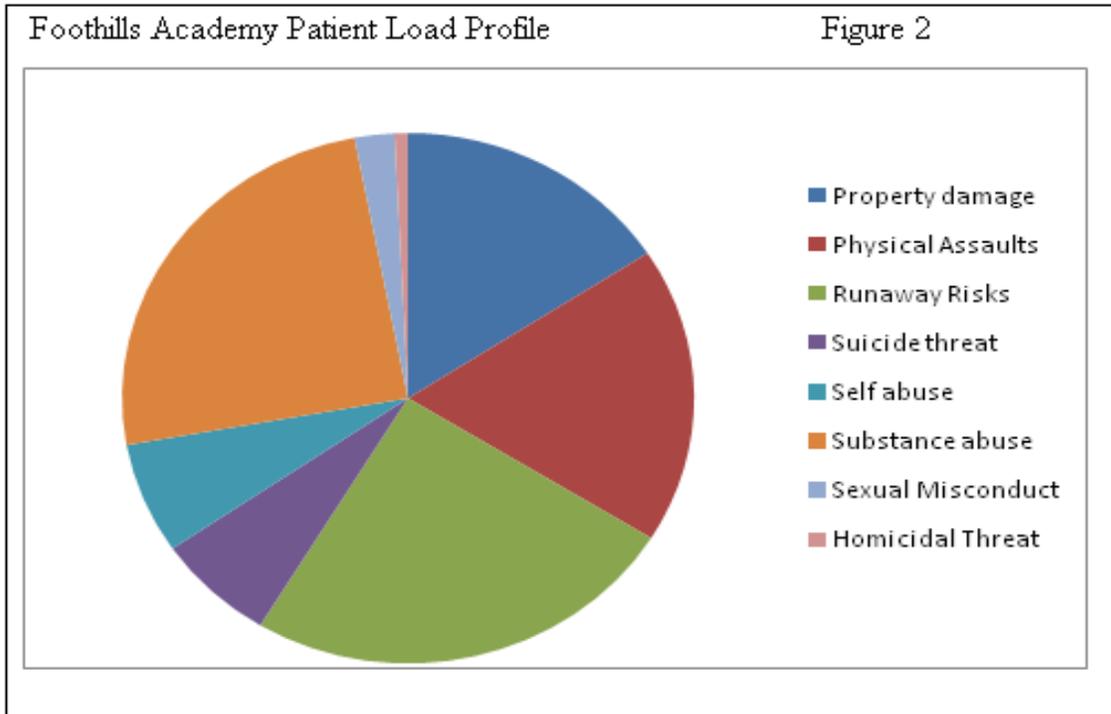
IV. BACKGROUND

The Foothills academy began as a concept of Circuit Judge Jeff Choate, who envisioned a treatment center to assist the numerous at-risk youth he encountered when presiding over juvenile cases. Judge Choate's vision became a reality when federal agents raided a personal residence in Clinton County and discovered the largest underground marijuana processing/growing facility in the nation. Choate was able to lease the property and home(s) to house his evolving dream.

Foothills Academy is an all-male residential treatment center in Albany, KY in Clinton County that is currently licensed for up to 72 resident juvenile patients. Opening its doors for patients in 2002, the facility serves young males from ages 12-18, offering individual, group, and family counseling. The treatment programs also include drug and alcohol counseling, anger and behavioral management, and basic independent living skills. Patients can come from three sources, including the Kentucky Department of Juvenile Justice, the Kentucky Department of Child Based Services, and state Alternative to Detention Program. Those from the Kentucky Department of Juvenile Justice are those evaluated youths who no longer require the extensive supervision of a juvenile delinquent facility, but still require treatment and further observation before being returned to their families and communities. The Kentucky Department of Child Based Services admits youth identified as at-risk in their home environments and patients not receiving the court ordered treatments or supervision their disorders require. Alternative to Detention Program participants are given a chance to address their issues and participate in rehabilitation treatment programs in lieu of serving time within the juvenile justice system.

The patients of Foothills Academy suffer from emotional and mental disorders, as well as substance abuse and addiction. These manifest through destruction of property, assaults on peers and caregivers, self abuse, suicidal threats, arson, and sexual aggression. As seen in Figure 2, Foothills Academy's community behavioral profile shows these manifested behaviors and disorders. As mentioned earlier in the study, many of these manifested disorders are found to co-occur with substance abuse issues and often "piggyback" with other behaviors, which can exacerbate medical conditions. These substance abuse cases, when combined with the general disorders, can create serious medical issues that require medical observation and attention. As a

result, Foothills Academy and other residential youth treatment programs also provide a LPN on staff, and access to a registered nurse hotline 24 hours a day, 7 days a week.



V. LITERATURE REVIEW

Residential Treatment programs have been around since the 1700s according to a 2007 study by the U. S. Department of Health Human Services. As the mental health field grew, treatment opportunities outside traditional hospital or home avenues have grown as well. Unfortunately, residential treatment programs have not received as close attention as other aspects of mental health (Quay, 1986). This may be due to the fact that researchers have found it difficult to study residential treatment patients with dependable outcomes because each participating patient is subject not only to their disorder, but also the level at which they suffer from their disorder, which defines both the type and level of treatment(Taylor, 2010). With a growing number of

youth suffering from emotional and mental disorders, as well as substance abuse issue, residential treatment programs are becoming a more utilized tool (Taylor, 2010). To insure that each patient is receiving the best possible care, the industry can benefit from a “best practices” assessment of residential treatment centers that lead their markets in performance.

Statistical analysis of data allows researchers to make inferences based on patterns observed in sample of the population/environment being observed. In this case, by establishing a standard of successful performance, we can then search for patterns that contribute to success. Defining and measuring success and ultimately establishing performance positions potentially allows concerned parties to identify high performing programs. With further analysis, concerned parties will (hopefully) be able to identify performance idiosyncrasies that allow particular programs to perform better than others. In the case of Foothills Academy, by comparing statistical data, the researcher can create a performance scale. Further focus on empirical evidence will allow researcher to theorize whether or not particular factors influence performance. Understanding efficiency factors can allow an organization to identify its strengths and weaknesses, which is the first step in addressing those potential limitations (Kott, 2010). The ultimate goal is when research has identified influencing factors, those factors can be adopted (or abandoned as needed) by other similar programs to increase efficacy.

VI. RESEARCH DESIGN

Preliminary literature review shows that residential treatment centers are often more suitable and more likely to produce successful transitions back into homes and communities than standard juvenile delinquent centers (Brown, 1998). Because of this, I began my research by identifying juvenile residential treatment centers in KY. Specifically, I conducted a comparative analysis of

Foothills Academy in Albany, KY and the 15 other similar institutions in Kentucky. My working research questions are “How does the Foothills Academy rate in program success compared with similar organizations in KY?” What accounts for differences in success between these institutions? These 15 residential treatment centers were identified using the Children’s Review Program (CRP) provided by the Bluegrass Regional Mental Health Mental Retardation organization—a partner with the Kentucky Cabinet for Health and Human Services. The CRP provides annual data on the 148 current youth residential treatment organizations in Kentucky. The CRP was created in a joint effort with the Kentucky Cabinet for Families and Children and the Department of Psychiatry at the University of Kentucky in 1995. The CRP is a tool for those professionals who work with any aspect of: assessment, plan treatments, service delivery, case management, program and policy development, analysis, and legislation for children and young adults. CRP is responsible for tracking patients (youth) through the system, tracking levels of care (LOC) per case, technical assistance via training, and program support. As this organization grows, its level of influence grows as well, with placement officials potentially utilizing their data collection and analysis to match patients with the most suitable treatment facility.

I have identified the 15 residential treatment centers in Kentucky that serve only males, ages 12-18 with levels of care (LOC) between 3 and 6. These 15 institutions do not include in their treatment populations individuals who are medically fragile (as defined by the Kentucky Department of Community Based Services), dependent on life support, chemically dependent, and/or pregnant. From the available data, I have been able to identify their patient load for 2009, their success rates, staff numbers, staff education levels and average length of time for program success. Table 1 lists the 15 organizations selected for this study.

Programs Analyzed for Study	Table 1
Barnabas Home Treatment Center	
Bellewood Center Group Home	
Bellewood Transitional Living	
Boys Haven	
Boys Haven Pre-ILP	
Brooklawn Child and Family Services	
Campbell Lodge Boys Home	
Children's Home of Northern Kentucky	
Children's Home of Northern Kentucky Maplewood	
Foothills Academy	
Maryhurst Bishop Flaget-Chabrat Home	
Metro Village Group Home	
New Pathways for Children-Shaw Road	
Sunrise-Crossroads Treatment Center	
The Life Connection	

I then found the number of patients who successfully completed the program and created a success rate percentage. At placement, a treatment panel of social workers, counselors, educators, and administrators interviews patients and reviews their files and history with the juvenile system. A personalized program is then designed for the patient, including several “milestones” set along the treatment timeline that indicate program participation and treatment progress. At each milestone, the patient is reviewed and judged on their ability to progress in the treatment plan or if a previous step needs to be readdressed. A success, in this study, is defined as a patient who completes their prescribed treatment programs (including all counseling, life skills, and substance abuse) and meets all mandated goals. A failure is a patient that fails to complete the program as prescribed for whatever reason, including being transferred out due to behavior issues, failing to comply with organizational policies and rules, or “aging out” of the

system. I then found the average number of successes for each treatment center and created a performance ranking that listed the treatment centers by their patient success percentages.

Once the success hierarchy had been established, I began to compare contributing factors that may have influenced organizational success. This stage of the research sought to establish a relationship between success rates and the ratio of patients to staff. The working theory here is that the greater number of staff monitoring and working directly and indirectly with the patient-- the greater chance the patient has in completing their treatment program.

The second statistical test is to compare state licensed and certified staff to success rates. This comparison is an attempt to find a correlation between the number of state licensed employees involved in an organization's treatment program and the percentage of patients who successfully complete their program. The working theory here is that those programs that utilize more certified clinicians will be better equipped to serve their patients, and better served patients will be more likely to complete their training programs. The collected data is averaged, so that a reflective educational profile of the program staff can be accurately portrayed.

The third statistical comparison began by looking at the number of patients a facility can provide services for at a time in order to identify patterns in patient load and success rates. This included all patients treated in the year 2009 I sought to find a correlation between patient's successful completion of their program with the number of patients being serviced. I theorized that the fewer patients a program cared for, the better the success average.

The fourth and final statistical comparison involved comparing the success averages to average length of successful treatment times. This involved compiling the number of program successes and failures, and then noting the number of days it took to either complete the program or be

transferred out. After recording the number of days each patient needed to complete their treatment program, I then averaged those days to find an overall average treatment length. The theory behind this assumed relationship being that lengthier programs allow patients more quantitative treatment, which would improve success rates.

VII. ANALYSIS AND RESULTS

My first step was in compiling a performance spectrum based on success rates, thus creating a ranking of performance from best to least. The ranking results can be seen as follows in TABLE 2.

Program Name	Success Rate %
Bellewood Transitional Living	81.8
Sunrise-Crossroads Treatment Center	80
Foothills Academy	79.5
Barnabas Home Treatment Center	79.2
Boys Haven Pre ILP	78.9
The Life Connection	73.5
Bellewood Center Group Home	72
Brooklawn Child and Family Services	70.3
Campell Lodge Boys Home	69.2
New Pathways for Children-Shaw Road	66.7
Boys Haven	64.3
Children's Home of Northern Kentucky Maplewood	63.6
Children's Home of Northern Kentucky	60
Maryhurst Bishop Flaget -Chabrat Home	55.6
Metro Village Group Home	35.7

I then calculated the patient to staff ratios, and posted the comparisons in order of program success rates. The data is listed as follows, on TABLE 3. To read the table, for every 1

patient at Bellewood Center Group Home, there 1.5 staff members there to provide service and supervision.

Patient to Staff Ratio by Study Ranking		Table 3
Program Name		Patient to Staff Ratio
Bellewood Transitional Living		1.35
Sunrise-Crossroads Treatment Center		1.5
Foothills Academy		1.1
Barnabas Home Treatment Center		1.03
Boys Haven Pre ILP		1
The Life Connection		1.7
Bellewood Center Group Home		1.12
Brooklawn Child and Family Services		1.27
Campell Lodge Boys Home		0.96
New Pathways for Children-Shaw Road		1.06
Boys Haven		1.9
Children's Home of Northern Kentucky Maplewood		1
Children's Home of Northern Kentucky		0.88
Maryhurst Bishop Flaget -Chabrat Home		1.58
Metro Village Group Home		0.98

I then ran a statistical correlation test that attempts to find a pattern between two variables, in this case the program rank percentage of each residential treatment program and that program's staff ratio. The correlation coefficient is a measure of how strong of a linear relationship might exist between two variables, in this case program success average and patient/staff ratio. The correlation coefficient is a number between (-1) and (+1). The closer the number is to (+1), the stronger the positive linear relationship between x and (meaning that as x increases, then so will y). The closer the correlation coefficient is to (-1), the stronger the negative linear relationship between x and y (as x increase, y decreases). The closer to zero a correlation coefficient approaches, the less likely a linear relationship exists between the two variables. In the case of

patient to staff ratio (appendix A), I calculated a correlation coefficient of -0.04528, which is close to 0. To further investigate the relationship between the two variables, I ran a regression analysis. Regression analysis is a statistical technique that measures the relationships of variables, and the reliability of predicting future values based on those variables. The completed regression for patient/staff ratio and program average success (appendix A) returned a significance F value of 0.872695. A significance value of greater than 0.05 means that the X values (patient/staff ratio) is statistically insignificant (at a 95 percent confidence level).

The next step in the program comparison process is look at the licensed treatment staff to see if there might be a relationship between percentage of state licensed and certified staff and program average success rates. Those results (seen below in TABLE 4) are ranked in order of successful treatment centers again, to see if obvious patterns or trends might be discerned. A correlation coefficient test is performed(appendix B), and the result is a correlation coefficient of -0.19232—a number still statistically close to zero, thus making it unlikely that a significant relationship exists between the two variables. A linear regression was also performed on this data set (appendix B) and the resulting significance F value of 0.492278(not significant at a 95 percent confidence level).

Program Name	Percentage of Staff Certified and Licensed
Bellewood Transitional Living	63
Sunrise-Crossroads Treatment Center	36.8
Foothills Academy	18.5
Barnabas Home Treatment Center	15
Boys Haven Pre ILP	50
The Life Connection	20
Bellewood Center Group Home	54.4
Brooklawn Child and Family Services	47.4
Campbell Lodge Boys Home	44.4
New Pathways for Children-Shaw Road	45.8
Boys Haven	38.9
Children's Home of Northern Kentucky Maplewood	55.3
Children's Home of Northern Kentucky	53.24
Maryhurst Bishop Flaget -Chabrat Home	68.2
Metro Village Group Home	33.6

The third stage of my analysis included patient load in comparison to average success rates.

Table 5 shows the patient load by program, on order of average success rate. Again, a correlation coefficient test was conducted (appendix C)—and the result was 0.173196(not statistically significant). When the data was run through regression analysis (appendix C), a significance F value of 0.537047(at a 95 percent confidence level), which again is above 0.05, and not statistically significant.

Patient Load by Program Ranking		Table 5
Program Name	Patient Load	
Bellewood Transistional Living	10	
Sunrise-Crossroads Treatment Center	12	
Foothills Academy	60	
Barnabas Home Treatment Center	27	
Boys Haven Pre LLP	10	
The Life Connection	50	
Bellewood Center Group Home	16	
Brooklawn Child and Family Services	73	
Campell Lodge Boys Home	26	
New Pathways for Children-Shaw Road	27	
Boys Haven	30	
Children's Home of Northern Kentucky Maplewood	24	
Children's Home of Northern Kentucky	36	
Maryhurst Bishop Flaget -Chabrat Home	11	
Metro Village Group Home	12	

My final attempt at comparing program traits and program success averages focused on the average treatment times for various programs. I again ranked those individual program time averages by day, scaled to the performance success averages, as seen below in Table 6. As to form, I ran a correlation test on the data (appendix D), which resulted in statistically insignificant coefficient of 0.282296(at a 95 percent confidence level). Again, when I entered the data into a regression test, I ended up with a significance F number of 0.308010, which is again larger than 0.05 and thus statistically insignificant (at a 95 percent confidence level).

Program Name	Average Program Length
Bellewood Transitional Living	264.7
Sunrise-Crossroads Treatment Center	487.5
Foothills Academy	278.8
Barnabas Home Treatment Center	381.1
Boys Haven Pre ILP	142.8
The Life Connection	570.1
Bellewood Center Group Home	194.2
Brooklawn Child and Family Services	338.2
Campell Lodge Boys Home	242.9
New Pathways for Children-Shaw Road	393.9
Boys Haven	155.1
Children's Home of Northern Kentucky Maplewood	234.9
Children's Home of Northern Kentucky	282.3
Maryhurst Bishop Flaget -Chabrat Home	162
Metro Village Group Home	255

VII. LIMITATIONS

This study is highly focused, with a narrow scope of investigation and an extremely small study group. While the compared groups have similar profiles, other factors were not taken into consideration that may play influential roles in a residential program’s success. While the study results have been found to be statistically insignificant, this can very well be caused by such a small sample—and that given a larger representation of the juvenile resident treatment programs, the variables may become significant. This study is also limited by time. We have a single year “snap shot” of residential programs in Kentucky, which doesn’t account for unique occurrences or spikes in performance. A long term study may see a more equal distribution of the data, and a more accurate representation to be interpreted. That more accurate representation might also

consider the affects of gender on residential youth treatment facilities, as well staff tenure and experience.

There is also the subjective question of what program success rates tell us. Is residential treatment truly effective in treating the disorders and manifestations of affected youth only if they “graduate” from their individual treatment programs? Is the patient’s behavior really changed or only temporarily adjusted to insure home reinstatement? The study fails to address patient’s external influences that can/could affect treatment success. The data available fail to note socio-economic background, family history of violence/addiction/criminal activity/victimization. The data also fail to reflect aftercare and relapse cases and subsequent encounters in the juvenile systems.

VIII. RECOMMENDATIONS

With no discernable influencing factors, I have to recommend further study and analysis to identify those potential influencing factors that affect program success. While the Foothills Academy is doing well in patients completing their prescribed treatments, (ranking third in the study group) there still may be techniques or practices that may help the program become even more effective in addressing its patients’ needs. It could benefit the residential treatment sector as a whole to cultivate open communications between providers to share best practices and discuss case by case challenges and success. I believe that a better understanding of effective treatment could be found by conducting a long term study of patients treated at residential treatment facilities in adolescence to see if there are future incidents within the adult criminal system (and to what extent), as well as reoccurrence of emotional and mental disorders and their effects on general health, and any substance abuse or addiction related occurrences.

Appendix A—Correlation Coefficient and Regression of Patient to Staff Ratio

Staff Ratio	Program Rank							
1.1	81.8							
1.58	80							
1.06	79.5							
1.35	79.2							
1	78.9							
0.98	73.5							
1.5	72							
1.7	70.3							
1.12	69.2							
0.88	66.7							
1.03	64.3							
0.96	63.6							
1.27	60							
1.9	55.6							
1	35.7							
SUMMARY OUTPUT								
<i>Regression Statistics</i>								
Multiple R	0.04528							
R Square	0.00205							
Adjusted R S	-0.07472							
Standard Err	12.55275							
Observation	15							
<i>ANOVA</i>								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	1	4.208547	4.208547	0.026709	0.872694536			
Residual	13	2048.429	157.5714					
Total	14	2052.637						
	<i>Coefficient</i>	<i>Standard Err</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	68.8589	3.408146	20.20421	3.34E-11	61.49605052	76.22176	61.49605	76.22176
Staff Ratio	-0.02448	0.149772	-0.16343	0.872695	-0.348040243	0.299086	-0.34804	0.299086

Appendix B—Correlation Coefficient and Regression of Staff Licensed and Certified

Percent of Staff Licensed	Program Rank							
63	81.8							
36.8	80							
18.5	79.5							
15	79.2							
50	78.9							
20	73.5							
54.4	72							
47.4	70.3							
44.4	69.2							
45.8	66.7							
38.9	64.3							
55.3	63.6							
53.24	60							
68.2	55.6							
33.6	35.7							
SUMMARY OUTPUT								
<i>Regression Statistics</i>								
Multiple R	0.192321							
R Square	0.036987							
Adjusted R Square	-0.03709							
Standard Error	12.33106							
Observations	15							
ANOVA								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	1	75.92149	75.9214854	0.499303	0.492278228			
Residual	13	1976.716	152.055065					
Total	14	2052.637						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	74.96509	9.438452	7.9425202	2.42E-06	54.57455697	95.35563	54.57456	95.35563
Staff Education Level	-0.14611	0.206781	-0.7066135	0.492278	-0.592836834	0.300609	-0.59284	0.300609

Appendix D—Correlation Coefficient and Regression of Average Successful

Program Length

Successful Program Length	Program Rank							
264.7	81.8							
487.5	80							
278.8	79.5							
381.1	79.2							
142.8	78.9							
570.1	73.5							
194.2	72							
338.2	70.3							
242.9	69.2							
393.9	66.7							
155.1	64.3							
234.9	63.6							
282.3	60							
162	55.6							
255	35.7							
SUMMARY OUTPUT								
<i>Regression Statistics</i>								
Multiple R	0.282296							
R Square	0.079691							
Adjusted R Square	0.008898							
Standard Error	12.05456							
Observations	15							
ANOVA								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	1	163.5766	163.5766	1.125689374	0.308010981			
Residual	13	1889.061	145.3124					
Total	14	2052.637						
<i>Coefficients</i>								
	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>	
Intercept	60.56028	8.267532	7.325074	5.7889E-06	42.69936597	78.4212	42.69937	78.4212
Average Program Completion	0.027808	0.026209	1.060985	0.308010981	-0.028814263	0.08443	-0.02881	0.08443

Bibliography

Brown, S (1998) *Understanding Youth and Crime (Listening to youth?)*, Buckingham: Open University Press

Burns, BJ, Hoagwood, K, Mrazek, PJ, “Effective Treatment for Mental Disorders in Children and Adolescents,” *Clinical Child and Family Psychology Review* [2:199-254]. 1999.

DHHS (U.S. Department of Health and Human Services), *Mental Health: A Report of the Surgeon General*. 1999.

DHHS (U.S. Department of Health and Human Services), *Achieving the Promise: Transforming mental health care in America*. Pub. No. SMA-03-3832), Rockville, MD: US, 2003.

Kott, Katherine. *Considering Residential Treatment for Youth in the Continuum of Care: A Systems Perspective*. Residential Treatment For Children & Youth, Volume 27, Issue 1 January 2010, pages 14 – 22.

Isett et al. (1980) in McCurdy, B.L., McIntyre, E.K., “And What About Residential...?” Reconceptualizing Residential Treatment as a Stop-Gap Service for Youth with Emotional and Behavioral Disorders,” *Behavioral Interventions*. [19:137-158.] 2004.

Masi, R & Cooper, J. *Children’s Mental Health: Facts for policy makers*. National Center for Children in Poverty, Columbia University. November, 2006.

McCurdy, BL, McIntyre, EK, “And What About Residential...?” Reconceptualizing Residential Treatment as a Stop-Gap Service for Youth with Emotional and Behavioral Disorders,” *Behavioral Interventions*. [19:137-158.] 2004.

NIMH (National Institute of Mental Health, NHIS (National Health Indicators Survey), *American Children: Key National Indicators of Well-Being*, See National Center for Health Statistics, Centers for Disease Control <http://www.cdc.gov/nchs/> accesses through NIMH Website, 2007.

Nemours Foundation, “About Teen Suicide” at www.kidshealth.org/parent/emotions/behavior/suicide.html. Accessed March, 2010.

Quay, H. (1986). Residential Treatment. In H. Quay & J.S. Werry (Eds.), *Psychopathological disorders of childhood*. (3rd ed., pp. 558-580). New York: John Wiley.

Taylor, Sarah Ann. Anderson, Kerrie. Mudford, Oliver C. "Effects of textual response prompts for adolescents in a substance abuse treatment program." *Behavioral Interventions*. (25: 145-155) 2010.