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Analysis of Psychological Symptoms of Youth in Residential Treatment Centers

An honors thesis presented to the  
Department of Criminal Justice,  
University at Albany, State University of New York  
in partial fulfillment of the requirements  
for graduation with Honors in Criminal Justice  
and  
graduation from The Honors College

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### **Abstract**

Residential treatment centers (RTCs) are equipped with the resources to increase coping skills, decrease antisocial behaviors, and foster positive personal growth. The purpose of this study is to analyze the prevalence and severity of psychological symptoms of youth entering and as they adjust to a treatment program in a RTC. Biological sex is also looked at to determine if sex influences the youth's psychological symptoms and adjustment to program with the youth's adherence to rules and engagement in treatment used to also show adjustment to program. The study concluded that there was a decrease in the prevalence and severity of psychological symptoms over the course of treatment, but there were not enough data to draw conclusions on the youth's adherence to residential rules or the youth's engagement in treatment. Also, females were more likely to enter a RTC program with more psychological symptoms and average more severe symptoms than males over the course of the program.

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**Introduction:**

Residential treatment centers (RTCs) have been around for the past 100 years, but there is still not much known about them in the field of research. While studies evaluate the effectiveness of some of these centers, it is hard to compare the results based on the fact that there is not a standard definition used in determining what a residential treatment center is. For the purpose of this paper, a residential treatment center is defined as a facility which is equipped with a therapeutic milieu, a multidisciplinary team, deliberate client supervision, intensive staff supervision and training, and consistent administration and clinical oversight. This paper will include data from two residential treatment centers in a large city in Upstate New York. This paper aims to determine how many juveniles within the two programs experience psychological symptoms going into treatment and as they adjust to the program. From that, the prevalence and severity of those symptoms would be analyzed over time to determine if the program has an effect on those symptoms. This would allow analysis not only on the effectiveness of treatment on managing those symptoms, but also whether the treatment is effective in regards to the end goal of accomplishing positive personal growth in the lives of the youth. Analyses of the youth's adherence to residential rules as well as the youth's engagement in treatment were used to check adjustment to program since many factors go into a youth's adjustment. Lastly, since the dataset contains information from both an all-male and all-female residential treatment center, the variable of biological sex will be analyzed to determine any influence on the likelihood of experiencing psychological symptoms and the effectiveness of the program.

**Background:****Historical Background**

What are residential treatment centers? Residential treatment centers are facilities which offer a live-in therapeutic experience to combat substance abuse, mental health disorders, or other behavioral problems. These facilities were not always like this though.

In the 1600s, Great Britain first established the Poor Law, which allowed impoverished children the chance to obtain apprenticeships by removing them from their homes and making them live in group homes<sup>1</sup>. The United States adopted a similar system in the 1800s, but often mentally ill children who could not live at home were placed in jails with adults because people did not know how to handle them<sup>1</sup>. It was not until the 1900s, in which Anna Freud and her peers, who were a part of the Vienna Psychoanalytic Society, started working on how to care for these children. They created residential treatment centers for children and adolescents with emotional and behavioral disorders<sup>2</sup>.

In 1914, a man of the name of Bruno Bettelheim started his work on increasing awareness of staff attitudes toward children in treatment. He viewed RTCs as communities in which everyone would have a part in shaping the children's behaviors, but a big component of his was that children could not see their families while in treatment<sup>2</sup>. The emphasis of improving long term outcomes after treatment was placed on the family<sup>3</sup>. After World War 2, Bettelheim along with others established the notion that residential treatment centers should be therapeutic in nature and an alternative for youth who cannot live at home<sup>4</sup>.

There was a second wave of reform in the 1960s in which Dr. Albert Treischman continued working with the Vienna Psychoanalytic Society and established the Walker Home

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<sup>1</sup> Callan J. E. (1976). "Residential treatment for youth: a bicentennial consideration". *Journal of Clinical Child Psychology*. **5** (3): 35–37

<sup>2</sup> Cohler B.J., Friedman D.H. (2004). "Psychoanalysis and the early beginnings of residential treatment for troubled youth". *Child and Adolescent Psychiatric Clinics of North America*. **13** (2): 237–254.

<sup>3</sup> Geurts E. M. W., Boddy J., Noom M. J., Knorth E. J. (2012). "Family-centered residential care: the new reality?". *Child & Family Social Work*. **17** (2): 170–179

<sup>4</sup> Zimmerman D.P. (2004). "Psychotherapy in residential treatment: historical development and critical issues". *Child and Adolescent Psychiatric Clinics of North America*. **13** (2): 347–361

and School<sup>1</sup>. This facility was for adolescent males with severe emotional or behavioral disorders and an intricate part of the process was to involve the families of the males residing there. Dr. Tresischman believed it was important to include all aspects of a child's life in treatment and improve the relationships within the family, public schools, and the community<sup>2</sup>.

The 1980s was characterized with the emergence of cognitive behavioral therapy and its increased use in child psychiatry. This therapy was seen as a source of intervention for youth and was embraced in RTCs to produce better long-term results<sup>2</sup>. Due to the number of children who were admitted with histories of abuse or neglect, attachment theory was developed. These children needed staff members who were knowledgeable about the trauma they went through and were able to provide specialized care<sup>4</sup>.

There was a dramatic increase in the number of children admitted to RTCs in the 1990s, resulting in the shift from institutional-based services to a system of care focusing on family and the community<sup>5</sup>. Though the increase has brought attention to the lack of treatment resources, RTCs are continuing to grow and youth are still being placed at them<sup>6</sup>. Currently the estimate of residential treatment centers in the United States is approximately 1,600<sup>7</sup>. Today, there are RTCs available for adults as well as for children, but they come in many different forms.

### **Residential Treatment Centers for Youth**

Residential treatment centers provide treatment for various issues and disorders. In the case of providing care for youth, a lot of the disorders that are seen are oppositional defiant disorder, conduct disorder, depression, attention deficit hyperactivity disorder, and some

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<sup>5</sup> Susan Yelton, Children in residential treatment — Policies for the '90s, Children and Youth Services Review, Volume 15, Issue 3, 1993, Pages 173-193.

<sup>6</sup> Latest Findings in Children's Mental Health, Nearly 66,000 Youth Live in U.S, Mental Health Programs, Vo1. 2, No. 1 (Summer 2003).

<sup>7</sup> "Residential Treatment Centers Database", *Residential Treatment Centers Dot Me*, January 21, 2014.



personality disorders. The youth could also be placed in RTCs due to educational issues, phase-of-life issues, as well as drug or alcohol abuse<sup>8</sup>.

Residential treatment centers are focused primarily on providing care for high need youth, but the ways in which they offer care can come in a variety of ways. Some are facilities which resemble schools and dormitories, where others are wilderness retreats. Wilderness retreats are characterized by being either 8-12 week or 25-35 day trips, guide participants toward self-reliance and self-respect, and provide treatment through the use of experience-based education<sup>9</sup>. The treatment centers which resemble schools and dormitories also are characterized by various lengths of stay, guide participants toward self-reliance and self-respect, but are more structured and offer a wider variety of opportunities in the facility, school, and community.

The size can influence how treatment is provided in some centers as well as how secure they are. Some RTCs are considered generalist which means the facility is larger in size, providing care from 80-250 youth, and operate under a reward and punishment system. Other RTCs are considered specialist which means they are smaller in size with less than 100 youth, even as small as servicing 10-12 children, and are not as focused on behavioral modification as some of the generalist centers are<sup>8</sup>. Some are considered lock-down facilities which means the youth are not allowed to freely move around the building or outside, where some are unlocked facilities which allow youth to move with relative freedom around the facility but cannot leave the building or property without special permission<sup>8</sup>.

As mentioned earlier, the field does not have a standard definition of a residential treatment center, but most evaluate the status on a facility if it follows five criteria. The criteria

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<sup>8</sup> "Principles of Care for Treatment of Children and Adolescents with Mental Illnesses in Residential Treatment Centers". *American Academy of Child and Adolescent Psychiatry*. Retrieved 2012-11-30.

<sup>9</sup> Davis-Berman, Jennifer; Berman, Dene S. (1 January 1993). "Therapeutic wilderness programs: Issues of professionalization in an emerging field". *Journal of Contemporary Psychotherapy*. **23** (2): 127–134.

to be a RTC is it must contain: a therapeutic milieu, a multidisciplinary team, deliberate client supervision, intensive staff supervision and training, and consistent administration and clinical oversight<sup>10</sup>. For the purpose of this paper, the residential treatment centers used in the study serve a mixed population of youth (e.g. youth placed for Persons in Need of Supervision (PINS) petitions filed in Family Court by schools, law enforcement, or parents; youth placed for their safety through Departments of Social Service (DSS); and youth placed for specialized education programs (CSE or Committee on Special Education)), are located in an large Upstate New York city, and provide all the criteria mentioned above to provide treatment for the youth placed in their care.

### **Literature Review:**

#### **Treatment Centers for Youth**

Residential treatment centers are tasked with providing high-need youth resources to rehabilitate and foster positive personal growth. The youth found in RTCs range from needing residential treatment, day education, specialized treatment plans, after school care, or a combination of those listed. While RTCs offer a variety of treatments, it is best to shape treatments for those who will be using them for the treatment to make the biggest impact. In a study designed to investigate the treatment outcome differences between youth offenders from the joint commission accredited RTC and youth from a non-accredited center, the researchers also analyzed youth offender risks<sup>11</sup>. Coll et al. found that youth most at risk for needing

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<sup>10</sup> Bettmann, J. E., Lundahl, B. W., Wright, R., Jaspersen, R. A., & McRoberts, C. H. (2011). Who are They? A Descriptive Study of Adolescents in Wilderness and Residential Programs. *Residential Treatment For Children & Youth*, 28(3), 192-210.

<sup>11</sup> Coll, K. M., Sass, M., Freeman, B. J., Thobro, P., & Hauser, N. (2013). Treatment Outcome Differences Between Youth Offenders From a Rural Joint Commission Accredited Residential Treatment Center and a Rural Non-Accredited Center. *Residential Treatment For Children & Youth*, 30(3), 227-237.  
doi:10.1080/0886571X.2013.819274

intensive professional care were those displaying high levels of risk factors such as alcohol or other drug abuse or addition, lack of parent-child closeness, family conflict, early childhood aggressiveness, antisocial behavior, poor peer acceptance, and deficient social connections. These are known as Aversive Childhood Experiences (ACEs), and a child's exposure to these experiences can impact his or her neurodevelopment and impair cognitive functioning or ability to cope with negative or disruptive emotions which in turn can lead to substance abuse, disease, disability, social problems, and premature mortality.<sup>12</sup> Knowing a child's ACE score can help minimize the impact and meet the specific needs of the adolescent. This is similar to the findings in the study conducted by Bettmann et al. They conducted a study on residential and wilderness treatment programs due to the lack of knowledge of who are placed in them<sup>10</sup>. The adolescents placed in treatment programs are of the highly oppositional and acting out population. These are youth who are having their disorders treated with medications, have co-occurring substance abuse problems, have higher rates of suicidal ideation, and higher ACE scores<sup>10</sup>.

Often the success of residential treatment centers is based on whether the adolescents adapt to treatment or reoffend after program completion. A study conducted by Thomson et al. analyzed a RTC for females in Massachusetts<sup>13</sup>. They found a 77% reduction in restrictive level of care placements comparing the year before admission to a year after discharge. Success rates suggest improvements accomplished during long term residential treatment programs are sustained by a majority of adolescent females up to at least one year discharge.

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<sup>12</sup> Adverse Childhood Experiences. (2017, May 1). Retrieved May 2, 2017, from SAMHSA website: <https://www.samhsa.gov/capt/practicing-effective-prevention/prevention-behavioral-health/adverse-childhood-experiences>

<sup>13</sup> Thomson S, Hirshberg D, Qiao J. Outcomes for Adolescent Females After Long-Term Residential Treatment. *Residential Treatment For Children & Youth* [serial online]. July 2011;28(3):251-267. Available from: Criminal Justice Abstracts with Full Text, Ipswich, MA. Accessed May 4, 2017.

We evaluate the effectiveness of programs in reducing rates of recidivism and secure placements, but there are not much data on the actual programs. In a study conducted by Lynch et al, they described the “national picture for residential treatment centers for youth [as] lacking”<sup>14</sup>. They argued that the reason why the field is lacking is due to the differences in how residential treatment centers are defined. Residential treatment centers can be wilderness retreats or can be secure facilities that resemble schools. A problem with this could be the laws that govern how information about youth can be attained and how it can be published. Nothing is able to be identified which can make it hard to find centers that are similar to the RTC being evaluated. The development of a consensus definition of RTCs is a necessary first step in collecting data and assessing the state of the system<sup>14</sup>. The purpose of this study is to define the residential treatment centers being evaluated as well as look at the impact treatment has on psychological symptoms of the youth.

### **Psychological Symptoms in Youth**

Due to the trauma and mental health disorders high-need youth experience, managing psychological symptoms are an important aspect of treatment programs. These symptoms can be influenced by a variety of things. In terms of gender, boys were found to have higher levels of life satisfaction, but other studies revealed a consistently weak relationship between gender and life satisfaction<sup>15</sup>. Also, socioeconomic status (SES) influences this because low SES families have emphases on traditional gender roles (i.e. females are socialized to perform household tasks, take care of brothers, and not pushed to excel in school which means less stress outside the

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<sup>14</sup> Lynch, S., Teich, J., & Smith, K. (2017). Psychiatric Residential Treatment Centers for Children and Adolescents: Modeling Variation in Facility Definition Type. *Journal Of Child & Family Studies*, 26(4), 1219-1229. doi:10.1007/s10826-016-0640-1

<sup>15</sup> Lipschitz-Elhawi, R., Itzhaky, H., & Michal, H. (2008). The Contribution of Background Variables, Internal and External Resources to Life Satisfaction among Adolescents in Residential Treatment Centers. *Residential Treatment For Children & Youth*, 25(3), 271-288. doi:10.1080/08865710802429713

home)<sup>15</sup>. They may report more psychological symptoms because girls from disadvantaged areas see themselves as the lowest level of the family hierarchy and may detract from satisfaction of girls who perceive themselves as deprived in comparison to those from higher SES backgrounds<sup>15</sup>. In the same study, researchers analyzed the years spent in residential treatment programs. Those who are in the program longer are more confident and have a greater sense of self-esteem because of their senior status at the treatment center<sup>15</sup>.

## **Methods:**

### **Sample**

The sample consists of 330 adolescent males and females from two residential treatment centers located in a large Upstate New York city between October 2001 and January 2004. The data were collected in April 2005. Of the 330, 113 adolescents met the conditions for this study with 56 males and 57 females. The conditions for this study included logged data for psychological symptoms over the period of time the adolescents were in the program.

### **Apparatus**

Of the 330 youths in the sample, 132 had consent from guardians to be interviewed at four different points during and after RTC treatment. Data were also collected from client files. For the other 200 youths, data were collected from agency files only. The youths were asked to answer questions on a 1-7 Likert scale with 1 being not at all and 7 being always. Some sample questions under psychological symptoms are: how often (from never to always) in the last month do you remember...feeling overtired, feeling low or depressed, losing your appetite, etc. A sample question to measure adherence to rules is how much would you agree or disagree with the following statements as a description of behavior (1 being strongly disagree to 7 being

strongly agree). Sample statements would be: the youth cooperated with staff, or the youth respected the rights of his/her peers. Sample statements to react to from the youth engagement in treatment section are: this youth is finally doing some work on his/her problems, the youth feels staff here like him/her, and how often would you say this youth goes on home visits that she/he is eligible for. The data analyzed were previously collected and have been deidentified.

### **Variables**

The responses to the questions were on a Likert scale from 1 to 7 where 1 is not at all and 7 is always. For the case of youth engagement in treatment, the scale was from 1 to 10 with 1 being either not very positive, not very often, or not very committed based on the type/wording of question and 10 being very positive, very often, or very committed. Due to it being a Likert scale, the prevalence of the variable can be determined by if there is a score and the severity can be inferred by the number amount (i.e. the lower the number, the less severe).

### **Psychological Symptoms**

The number and severity of psychological symptoms of the adolescents were recorded upon entry to the residential treatment program as well as throughout the adolescent's stay at the center. This would allow analysis not only on the effectiveness of treatment on managing those symptoms, but also whether the treatment is effective in regards to the end goal of accomplishing positive personal growth in the lives of the youth.

### **Youth Adherence to Residential Rules**

Youth adherence to residential rules was another variable to determine adjustment to program. If an adolescent adheres to rules while in the program and increases that over

time, it can be inferred he or she is making progress through treatment and is making more positive choices.

### **Youth Engagement in Treatment**

The engagement in treatment of the youth was taken over time to determine if the adolescent was involved in the treatment program. Youth involved in their treatment program are more likely to benefit from the treatment.

### **Biological Sex**

Biological sex was used as a variable to determine if the sex of the adolescent has any influence on the prevalence and severity of psychological symptoms upon entry into treatment as well as if it has an influence on the adjustment to program through psychological symptoms. It was also used to determine if those of a particular sex involved with RTCs are at a higher risk of also having psychological symptoms.

### **Procedure**

The study was completed under the approval of the University Institutional Review Board as well as approval from the residential treatment centers. The data analyzed were previously collected and has been deidentified. Data from the adolescents were collected through questionnaires, interviews, and reviews of personal files.

To gain the sample size, only adolescents with psychological symptoms data were used for the purpose of this study. To determine the amount of youth that have data on psychological symptoms, only those with psychological symptoms data were selected for analysis. A frequencies test was used to determine the sample size.

To determine the trend over time of the prevalence of psychological symptoms, a descriptive test was used using SPSS also. The difference in the number of psychological

symptoms measured the adjustment to the treatment program. The same tests were run for adherence to residential rules and youth engagement in treatment.

## **Results:**

### **Psychological Symptoms**

The descriptive tests ran in SPSS on the psychological symptoms of the adolescents are shown in figures 1-4. The vertical axis is the descriptive listed while the top are the groups of adolescents. The total score are the numbers when the entire sample is considered where the males and females column are the results from the tests when only a certain residential treatment center was considered. The variable of biological sex was able to be measured by which treatment center the youths were admitted to since the residential treatment centers are separated by biological sex. The responses were recorded by a Likert scale from 1 to 7 with the maximum score being 56. For the first wave, the minimum the adolescents scored in psychological symptoms was 0 and the maximum was 45. The mean score for youth in the first wave was 19.4, males were 13.7, and females were 22.9. The means for the second wave were 17.44 (total), with a mean of 13.20 for the males and 20.66 for the females. The third wave means were 15.86 (total), 12.56 (males), and 17.88 (females). For the final wave, the means were 14.65 (total), 11.85 (males), and 16.35 (females). The mean scores for psychological symptoms for all groups decreased over time. When analyzing in terms of biological sex, females were at higher risk of experiencing psychological symptoms than males, or are more likely to report their psychological symptoms.



**Figure 1. Youth Wave I**

	<b>Total Score</b>	<b>Males</b>	<b>Females</b>
<b>Min</b>	0	0	4
<b>Max</b>	45	40	45
<b>Mean</b>	19.43	13.68	22.93
<b>Standard Deviation</b>	10.70	10.41	10.71

**Figure 2. Youth Wave II**

	<b>Total Score</b>	<b>Males</b>	<b>Females</b>
<b>Min</b>	2	0	2
<b>Max</b>	43	43	42
<b>Mean</b>	17.44	13.20	20.66
<b>Standard Deviation</b>	10.20	8.83	10.39

**Figure 3. Youth Wave III**

	<b>Total Score</b>	<b>Males</b>	<b>Females</b>
<b>Min</b>	0	0	0
<b>Max</b>	36	34	36
<b>Mean</b>	15.86	12.56	17.88
<b>Standard Deviation</b>	8.78	8.14	9.03

**Figure 4. Youth Wave IV**

	<b>Total Score</b>	<b>Males</b>	<b>Females</b>
<b>Min</b>	0	0	0
<b>Max</b>	39	29	39
<b>Mean</b>	14.65	11.85	16.35
<b>Standard Deviation</b>	8.08	7.84	8.06

### Youth Adherence to Residential Rules

The descriptive tests ran in SPSS on the youth adherence to residential rules of the adolescents are shown in figures 5 and 6. Figure 5 is data taken at the 2<sup>nd</sup> point of time and figure 6 is data taken at the 3<sup>rd</sup> point of time. Data was not available for the first wave because there would be nothing to base the adherence to rules to. The vertical axis is the descriptive listed while the top are those who answered the questions. Those who answered the questions did so in a manner of evaluating their observations of how the youth adhered to rules. The responses were recorded by a Likert scale from 1 to 7. There was not a significant trend in the adolescents' adherence to residential rules with the data available.

**Figure 5. Adherence of Residential Rules Wave II**

	<b>Adherence from Youth Perspective</b>	<b>Adherence from Caregiver Perspective</b>
<b>Min</b>	2	0
<b>Max</b>	18	18
<b>Mean</b>	12.85	11.10
<b>Standard Deviation</b>	3.39	4.50

**Figure 6. Adherence to Residential Rules Wave III**

	<b>Adherence from Caregiver Perspective</b>
<b>Min</b>	1
<b>Max</b>	18
<b>Mean</b>	11.19
<b>Standard Deviation</b>	4.47

### Youth Engagement in Treatment

The descriptive tests ran in SPSS on youth engagement in treatment are shown in figures 7 and 8. Figure 7 is data taken at the 2<sup>nd</sup> point of time and figure 6 is data taken at the 3<sup>rd</sup> point of time. Data was not available for the first wave because there would be nothing to base engagement to treatment. The vertical axis is the descriptive listed while the top are those who answered the questions. Those who answered the questions did so in a manner of evaluating their observations of how engaged the youth was. There was not a second point of data to compare for the caregiver and clinical perspective, but there was from an educational staff perspective. The responses were recorded by a Likert scale from 1 to 10, which was different from the other sections. Due to these being the only two points of data for youth engagement to treatment, there was a slight decrease in mean engagement from 54.29 to 44.21, but the conclusion that youth decrease in engagement over the course of treatment cannot be made. More data would be needed to establish a trend.

**Figure 7. Youth Wave II**

	<b>Engagement from Caregiver Perspective</b>	<b>Engagement from Clinical Perspective</b>	<b>Engagement from Education Perspective</b>
<b>Min</b>	13	10	15
<b>Max</b>	81	82	76
<b>Mean</b>	54.21	55.84	54.29
<b>Standard Deviation</b>	14.75	15.46	15.25

**Figure 8. Wave III**

	<b>Engagement from an Education Perspective</b>
<b>Min</b>	13
<b>Max</b>	68
<b>Mean</b>	44.21
<b>Standard Deviation</b>	13.96

**Biological Sex**

Of the residential treatment programs used in this study, one served the purpose of offering resources and treatment to females and the other served a population of males. The mean of psychological symptoms in regards to biological sex from Figures 1-4 was repeated in Figure 9 without the combined psychological symptoms data from the entire sample. The average mean over the course of 4 waves for psychological symptoms were 12.82 for males and 19.46 for females. Females were more likely to experience more psychological symptoms and have those symptoms be more severe. It is also possible that females are more likely to report their symptoms or not minimize their symptoms.

**Figure 9. Means of Psychological Symptoms in Regards to Biological Sex**

	<b>Males</b>	<b>Females</b>
<b>YW1</b>	13.68	22.93
<b>YW2</b>	13.20	20.66
<b>YW3</b>	12.56	17.88
<b>YW4</b>	11.85	16.35
<b>Average</b>	12.82	19.46

**Discussion:**

The purpose of this study was to analyze the prevalence of psychological symptoms in youth as they enter and adjust to two residential treatment programs. From that, the prevalence and severity of those symptoms was analyzed over time to determine if the program had an effect on those symptoms. This would allowed analysis not only on the effectiveness of treatment on managing those symptoms, but also whether the treatment was effective in regards to the end goal of accomplishing positive personal growth in the lives of the youth. Lastly, since the dataset contained information from an all-male and an all-female residential treatment center, the variable of biological sex was analyzed to determine any influence on the effectiveness of the program.

As seen in the results, the severity of psychological symptoms decreased in both males and females during their stay in the residential treatment programs. This could be a result of the program whether it is due to an access to medication, progress from therapy, learning new coping skills, a more positive and supporting environment, a combination of those listed, or something not listed at all. While the symptoms did decrease for both males and females over time, there was a difference in the severity and prevalence of psychological symptoms between the two biological sexes.

When analyzing in terms of biological sex, females were at higher risk of experiencing psychological symptoms than males. This could be that females are experiencing more psychological symptoms and having symptoms that are more severe, but it also could be because of something else. A majority of adolescents who are placed in RTCs are of lower socioeconomic status households which are more likely to conform to gender roles and stereotypes. A part of these gender roles is that males need to “man up” and may not feel as if

they can report any psychological symptoms they face or would minimize the ones they report. Females may not be experiencing more psychological symptoms, but instead are more likely to report. There is also the concern that youths feel pressured to report a reduction in symptoms because they want to show progress through the program. These are limitations of self-report data.

When analyzing the youth's adherence to residential rules, there was not a significant trend with the data available. It was the same case when analyzing the youth's engagement in treatment. There was a decrease in engagement, but there was not enough data to form a solid conclusion.

This analysis showed that there is a decrease in psychological symptoms due to involvement in a residential treatment program and that there is a difference in experiencing those symptoms between males and females. By decreasing those symptoms, adolescents are better able to focus on other aspects of their lives such as school and building positive relationships to name a couple. Those symptoms are not as prevalent and influential on the adolescent's day to day life. By decreasing those symptoms, other aspects can flourish.

### **Future Research and Limitations:**

#### **Future Research**

This study showed there was a decrease in the prevalence and severity of psychological symptoms over the course of treatment, but there were not enough data to draw conclusions on the youth's adherence to residential rules or the youth's engagement in treatment. It would be interesting to see if other studies also came to the same conclusion as well as if other variables

were used to determine progress. Measuring the progress of adolescents and the success of residential treatment programs cannot be determined by one or two variables.

The results and discussion mention the increased likelihood of females to experience more psychological symptoms and have those symptoms be more severe. It should be looked into if this is the case or if females are more likely to report or exaggerate their symptoms. It is also a possibility that males do not report or minimize their symptoms due to conformity to gender roles and stereotypes. It should also be explored if youth feel pressured to report fewer symptoms as they participate in treatment. There is an emphasis on making progress while in treatment and may cause the youth to underreport their symptoms based on adhering to making progress.

In addition, not much is known about residential treatment centers, and the discourse over what is considered one contributes to that. Having the term residential treatment center as an umbrella term for everything from wilderness retreats to secure facilities offering a variety of services and everything in between does not allow for comparisons to be made between empirical studies. The way to combat that issue is for the field to determine the definition of a residential treatment center for the purposes of research, but also for more studies to be conducted and the researchers to mention the definition in which they are following.

### **Limitations**

Psychological symptoms are only one variable which can be used to determine progress and adjustment to a treatment program. While the RTC program is designed to increase coping skills and manage any negative symptoms the youths are experiencing, psychological symptoms can be influenced by a variety of factors. It is possible for an adolescent to manage his or her psychological symptoms through the use of medication or therapy, but do not adjust to the

program in other ways. While the variables adherence to residential rules and engagement in treatment were used as other measures of program adjustment, the main focus was on the psychological symptoms. Youth adjustment to the program could be caused by a particular variable or as a result of a combination of variables analyzed in this study as well as by variables not considered.

There is also the possibility that the youths were not accurately reporting their psychological symptoms. The data used were collected from interviews and self report questionnaires. There is always the possibility of under- or over-reporting when considering self-report data. Guidelines were not set to determine what constitutes each rating on the scales. What one person may consider as very often or positive progress, another may not. There is the possibility there are discrepancies due to the self-report methods.

In the analysis, there were data points that were unavailable. For the results of the variable youth engagement in treatment, data were only taken at two points, and the second point contained data from only one source (the educational staff perspective). For the adherence to residential rules variable, there were two data points taken at the first point of time, and also only one source of data at the second point. While it can give insight into a possible trend, it is impossible to form solid conclusions on the data. Also, there are data for only two points of time and the analysis can be strengthened by having more.

### **Conclusion:**

Residential treatment centers (RTCs) are equipped with the resources to increase coping skills, decrease antisocial behaviors, and foster positive personal growth. This study showed there was a decrease in the prevalence and severity of psychological symptoms over the course



of treatment, but there were not enough data to draw conclusions on the youth's adherence to residential rules or the youth's engagement in treatment. There are limitations to this study as well as the need for more information. Continuing to evaluate residential treatment centers will enable us to have a better understanding of how to provide treatment for high-need youth.

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