Article • Implementation of Vision Therapy at a Youth Rehabilitation Facility

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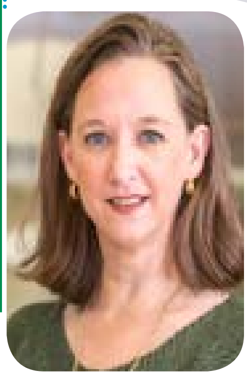

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ABSTRACT

In the United States, there is an increasing number of teenagers and youth who are experiencing mental health, emotional, or behavioral disorders. Treatment for these disorders ranges from outpatient, one-on-one counseling to group therapy to inpatient hospital admission. Residential youth rehabilitation facilities, where adolescents receive around-the-clock care and supervision, are one option for intensive treatment.

Many youth rehabilitation facilities have on-site medical clinics, but few offer optometric vision therapy as an included aspect of care. One residential rehabilitation facility for at-risk youth, Youth Villages, does offer full-scope optometric care, including vision therapy, to its residents, in partnership with Southern College of Optometry. The six case summaries included here outline some of the unique challenges faced in implementing vision therapy in an unconventional clinical setting, including psychiatric, attentional, and behavioral obstacles, as well as administrative issues, that can affect performance in vision therapy and its overall efficacy. Despite the hurdles that arise in such a facility, there is significant potential for positive vision therapy outcomes, and the opportunity is vast to provide care for youth in great need.

Keywords: Adverse childhood event, vision therapy, youth rehabilitation facility

Introduction

An increasing number of teenagers and youth are currently experiencing mental health, emotional, or behavioral disorders.[1-3] Among these are ADD/ADHD, anxiety, depression, and suicidal ideation. Adverse childhood events (ACEs) are associated with mental disorders in children; children aged 6-17 with three or more ACEs have a "higher prevalence of one or more mental, emotional, or behavioral disorder[s]" by a factor of more than 3.[1] ACEs include such entities as violent crime, domestic violence, parental alcoholism/drug use, sexual abuse, physical abuse, emotional abuse, and neglect.[4-6]

Behavioral, emotional, and mental disorders often begin in early childhood, and such disorders are often linked to alcohol and substance use or abuse in this population.[1-3] Although the rates of underage alcohol use are declining, underage drinking is still a major public health issue in the United States, particularly for girls,[7,8] and alcohol remains the most widely used substance in the adolescent age group.[7-10]

Although the rates of recreational or illicit drug use increased in adolescents from 2016 to 2020, showing a 61% increase among 8th graders in one survey,[7] adolescent drug use actually decreased in 2021.[8] Despite the recent decline, however, teen substance use is of significant concern due to the associated effects of such use. Teen substance use (including alcohol) has been shown to affect overall growth and development, including neurological development, and to cause physical illness, injury, or even death.[7,8,12] It impairs judgement and is associated with risky behaviors, such as unprotected sexual activity and dangerous driving. It is also associated with social problems (e.g., fighting, lack of participation, or withdrawal), educational difficulty, legal problems, violence (both as perpetrator or victim), and an increased risk of self-harm or suicide.[7,8] As there is a known relationship between adolescent and adult drinking,[7,10] as well as between adolescent smoking and later alcohol and drug use,[13] such use also contributes to a variety of systemic health problems in adulthood, including high blood pressure, heart disease, and sleep disorders.[12]

Treatment for adolescents who experience any of these conditions varies, from outpatient counseling services to peer group mentoring to inpatient hospital care. Residential care is also an option, where youth live at a facility for some period of time while rehabilitation services are provided; a variety of clinical facilities exist where youth can receive such rehabilitation services. Although it is generally preferable to avoid having to place youth in residential centers, some with severe emotional, mental, or behavioral disorders do best in facilities where there can be close supervision around the clock. Teens may be placed in residential care for a number of reasons, including danger to self, safety issues in the home (e.g., neglect, abuse), psychosis, drug or alcohol abuse, eating disorders, criminal or sexualized behavior, or severe mental health needs that cannot be addressed adequately through short-term hospitalization.[14-17] There is also considerable evidence that adolescents in the LGBTQ+ community are at increased risk for emotional, mental health, and eating disorders.[18-21] The most effective residential treatment facilities will include the following:[22]

- Comprehensive evaluation of emotional, mental, and behavioral needs
- An individualized treatment plan for each resident
- Individual and group therapy
- Psychiatric care
- Non-violent support and intervention
- Involvement of the resident's family when possible

Vision Therapy at Youth Villages

From its beginnings in 1986 as a small, local facility in Memphis, Tennessee that served fewer than 100 children per year, Youth Villages has grown into a multi-state institution with 100 locations. More than 32,000 children received services in the past year. A wide range of programs is available through Youth Villages, including at-home counseling, foster care, crisis intervention, and residential treatment.[23]

In January 2020, the newest residential facility in the Memphis-area Youth Villages network opened. Bill's Place serves both girls and boys ages 10-17 and includes a state-of-the-art medical clinic. Through this clinic, in partnership with Southern College of Optometry (SCO), we have been able to provide both comprehensive eye examinations and vision therapy services. Despite a delay due to the COVID pandemic (SCO began its on-site clinical service at Bill's Place in August 2020), optometric services are now available twice per week on the Youth Villages campus, with an SCO faculty member, a pediatric optometry & vision therapy resident, and a 4th-year intern providing care during each clinical session. Thanks to generous grant allocations, the Youth Villages clinic provides fully stocked, up-to-date clinical facilities for residents' eye care needs (Figures 1 and 2).

Since beginning clinical care at Bill's Place, we have begun vision therapy with a number of residents. Although these teens live at the facility, we have encountered several challenges with the implementation of regular VT services. Most of our patients are admitted to Youth Villages with significant psychological, behavioral, or emotional disorders. As a result, on numerous occasions, refusal to attend therapy is an issue. There have also been many instances in which attention span and cooperation levels have been too poor to allow for effective therapy. Medications frequently affect

Figure 1. *Exam lane at Youth Villages Bill's Place*

Figure 2. *Vision therapy room at Youth Villages Bill's Place, including office space (far end) and optical area (left)*

performance as well, whether from direct influence on the accommodative system or through secondary tiredness or lethargy. Finally, some patients have been removed from therapy by the Youth Villages staff based on behavioral issues not related to their vision therapy. The following case summaries describe several of the challenges faced when running vision therapy at a residential rehabilitation facility.

Patient 1

Patient 1 was a 13-year-old female who was admitted to the Rose Center at Youth Villages, the parallel facility to Bill's Place providing care to girls, for an unspecified psychiatric disorder. This diagnosis presented the first challenge to our implementation of vision therapy: without knowledge of the specific disorder, it was somewhat difficult to determine exactly in what direction to proceed with VT. Despite this, the patient had a comprehensive eye examination with dilation and was diagnosed with bilateral refractive amblyopia, deficient saccadic eye movements, and a multifactorial visual perceptual dysfunction.

When vision therapy began, it was immediately obvious that this patient's attention span was quite low. She had significant difficulty keeping on task and constantly wanted to be involved in any other activities happening in the room. (One side of the vision therapy room at Bill's Place serves as an office and optical station for comprehensive care.) In order to help the patient stay on task, she was offered the opportunity to help with filing, cleaning frames, and deleting junk emails after completing therapy activities. Because this was necessary, it was common for her to complete only three or four activities during a session.

Patient 2

Patient 2 was an 11-year-old female who was also a resident of the Rose Center; she was also admitted under the diagnosis of unspecified psychiatric disorder. Patients 1 and 2 were brought to Bill's Place together for their therapy due to transport rules of the facility, so another challenge arose that would not typically be encountered in a more typical vision therapy setting: one or the other of the two girls would have to wait for the full 45-minute session of the other to finish before starting her own (other institutional rules apply wherein patients are not to be in the room at the same time), thus increasing fatigue and restlessness prior to beginning a session.

As a result of her comprehensive exam, this patient was diagnosed with spasm of accommodation, convergence insufficiency, deficient saccadic eye movements, and a multifactorial visual perceptual dysfunction. During her therapy sessions, we noted an intentional tremor as she would reach for various objects, including pens/pencils. This caused quite a bit of difficulty for her on visual-motor activities or computer-based tasks. She also showed significant speech delays, making communication difficult as well. This patient had difficulty understanding most activities even after extensive explanation, causing her to become frustrated very quickly and give up easily. She also had a deep accommodative spasm, likely due to medications causing difficulty with clarity and comfort during therapy. This sometimes made completing activities impossible, prolonging her therapy and limiting progress.

Patient 3

Patient 3 was a 16-year-old male who presented to the eye clinic with a diagnosis of major depression. Throughout his comprehensive examination, he was quiet and withdrawn, volunteering little and berating himself for missed letters, which he interpreted as failures. He was diagnosed with intermittent alternating exotropia, spasm of accommodation, deficient saccadic eye movements, and visual perceptual dysfunction and was enrolled in vision therapy.

During his therapy, this patient showed extreme frustration during any challenging VT activities. Even on simpler activities, if he missed an answer or performed a task incorrectly, he immediately shut down and began to call himself "stupid," or "a failure." Once that occurred, it was very difficult to get him to try again. His attendance at therapy was sporadic; he refused to come for several weeks, limiting the effectiveness of his overall therapy program. Eventually, he stopped coming, as he was placed on lockdown due to behavior issues. We have not yet been able to restart his therapy.

Patient 4

Patient 4 was a 17-year-old transgender female who was actually one of our longest-duration vision therapy cases. She was admitted into the Youth Villages program with medical diagnoses of attention deficit/hyperactivity disorder and impulse control disorder, and her visual diagnoses included convergence insufficiency, deficient saccadic eye movements, and visual perceptual dysfunction. She was a particularly challenging patient to see in vision therapy since her behavior was quite unpredictable from one visit to the next, but we were able to see her for a total of 12 therapy sessions and were able to make progress on most visual skills.

During her therapy, this patient showed a great deal of difficulty staying on task. She would become distracted by any activity or conversation happening in either the large therapy room or the adjacent exam room, and she constantly asked for optometry staff to bring her presents "to remember them by." For a stretch of several weeks, she refused to attend therapy, and there were several more weeks where she arrived only to leave within minutes due to appointments that were not communicated to us by staff members. We received multiple reports of her being bullied, as well as starting fights with other residents. She was placed on lockdown due to behavior on more than one occasion and was therefore often unavailable for therapy.

Patient 5

Patient 5 was one of our most difficult cases. A 16-year-old female, this patient was also admitted to Youth Villages with a diagnosis of unspecified psychiatric disorder, but in her case, this manifested in serious, potentially life-threatening ways. Like patient 3, she was also very withdrawn and reticent during her comprehensive eye exam. She was able to complete the exam, however, and she was diagnosed with convergence insufficiency, intermittent alternating exotropia, deficient saccadic eye movements, and a multifactorial visual perceptual dysfunction.

During this patient's vision therapy, several observations were made that were of special concern. There were several incidents involving self-harm to the eyes prior to coming in for VT: she would "try to pull out her eye," leaving significant conjunctival disruption and subconjunctival hemorrhaging when this occurred. Of course, on those occasions, therapy was deferred in favor of a problem-oriented urgent health assessment. On multiple occasions, she would report swallowing common items (lipstick tubes, hair ties, etc.), leaving her in pain and unable to complete therapy activities. She also refused to attend therapy for several weeks and was eventually removed from therapy by Youth Villages staff when she was placed on lockdown due to behavior.

Patient 6

Patient 6, a 15-year-old male, was our most successful patient to date. He was admitted to Youth Villages with medical diagnoses of attention deficit/hyperactivity disorder and autism spectrum disorder, and he was diagnosed with intermittent right esotropia, deficient saccadic eye movements, and visual perceptual dysfunction at his comprehensive exam. Interestingly, he showed a distinct type of anomalous projection, covariation, upon detailed testing of his strabismus.

This patient made remarkable gains in his therapy program, and as such, he will be the subject of a subsequent paper. Despite one episode of lockdown due to behavior, and in contrast to the other patients mentioned in this series, he was quite high-functioning and was rarely unable to complete activities, despite lapses of attention. He showed improvement in both his attention and behavior throughout the course of VT, in addition to tremendous improvements in his visual abilities.

Discussion

Many issues arise when attempting to implement vision therapy services in a residential rehabilitation facility such as Youth Villages. As we have seen with our patients so far, these are generally behavioral in nature, and they run the spectrum from simple lapses of attention during therapy sessions to significant behavioral issues that prevent patients from attending at all. We have also encountered situations where therapy needed to be pre-empted based on emergent issues, as was seen with Patient 5.

In addition to these individual difficulties, we also encountered some institutional issues that complicated the delivery of regular vision therapy. As mentioned, when the girls presented for therapy from the Rose Center, which is located on the other side of the same campus as is Bill's Place, they arrived together. On several occasions, the transport was late, so therapy sessions could not begin promptly and had to be abbreviated in order to accommodate other schedules at Rose. Patient 5, also a resident of the Rose Center, was not allowed to be transported with any other residents, so Patients 1 and 2 would come, complete their therapy, and return; after this, the transport staff would return these girls to Rose and pick up Patient 5. On several occasions, she would refuse, but we were not always informed of this, leading to us delaying other patients while waiting for her to arrive.

Similar situations have occurred with the boys living at Bill's Place. The facility is divided into courtyards; only residents of the same courtyard are allowed to be in the clinic at the same time. Generally, this means that each patient is called to come to vision therapy individually, and we wait until they arrive to begin—whenever that happens to be. Staff shortages, made worse by the pandemic, have limited the availability of staff who can transport residents from their courtyard to the clinic. The same is true when therapy is finished and the resident is ready to return.

On other occasions, vision therapy patients will have other appointments to attend that interfere with their scheduled vision therapy time. We have had patients miss sessions due to therapy or counseling sessions, visits with family members, and court dates, in addition to those times when they are on behavioral hold or simply refuse to attend. Overall, this makes planning and flow of a complete VT program quite difficult.

Finally, it is always a bit of a guess as to when residents will be discharged from Youth Villages altogether. We make the best plan possible for therapy, but we always do so with the understanding that at any time, the patient might be transferred to another facility (one which likely does not offer vision therapy) or be sent home. When this occurs, as was the case just two weeks prior to this writing with Patients 1 and 2, we generate reports of the progress to date and add them to the patient's file, but we generally have no warning of discharge dates (and when we do, they often change), so having a finalized report ready for a patient's last session is difficult.

Conclusion

Despite the difficulty inherent with offering vision therapy in a residential rehabilitation facility like Youth Villages, the rewards are potentially great. As was seen with Patient 6, such one-on-one therapy can be of great benefit. In terms of these adolescents' overall wellbeing, and given that the services that we can provide are offered as an included part of the treatment plan, it would be a shame to waste the opportunity to do something, even though it is clearly not an ideal VT situation. These youth in particular have great need, and we are honored to be able to help to meet it.

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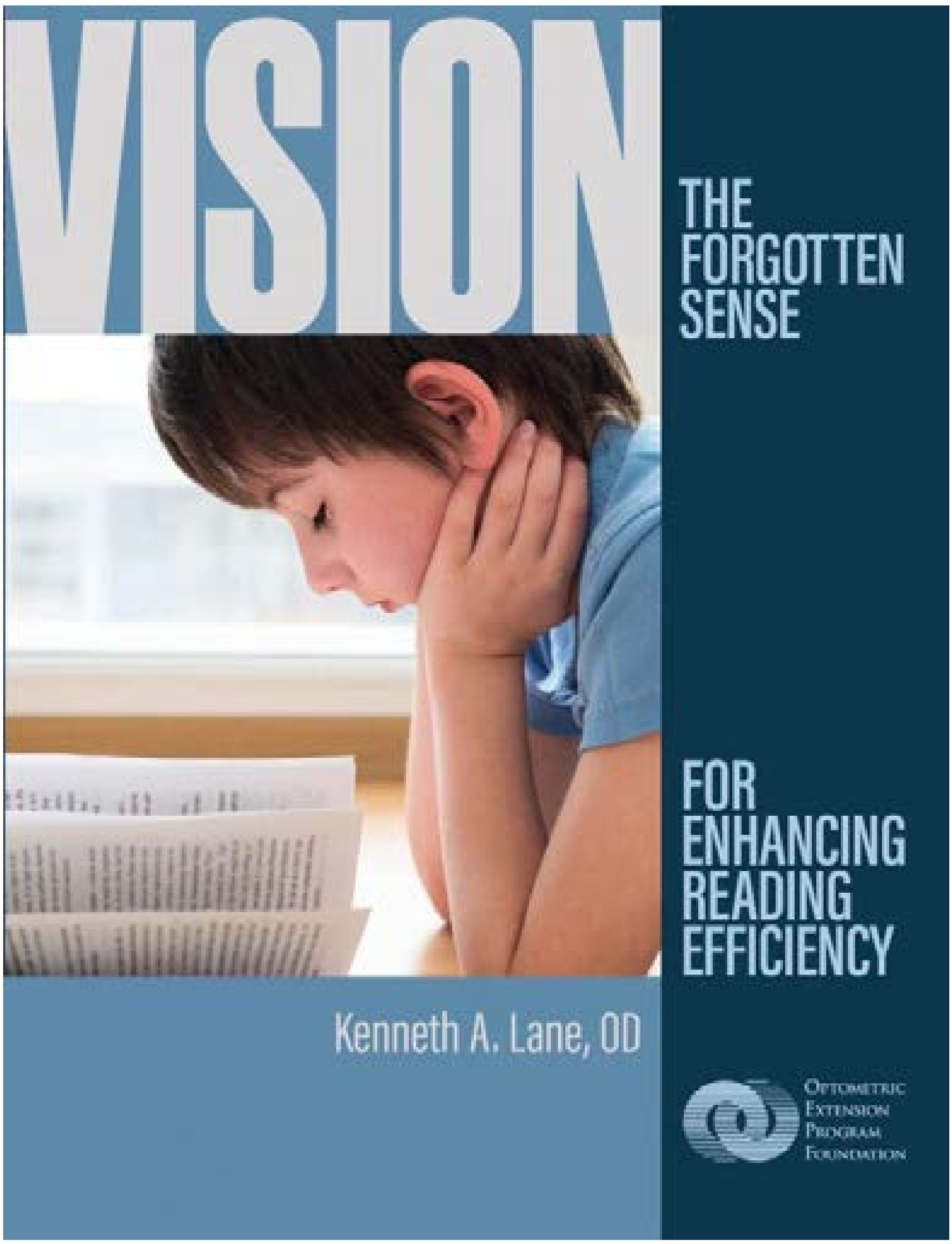

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