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What Psychosocial Factors are Associated with Positive Educational Outcomes?

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ABSTRACT

Vulnerable youth often face challenges with delayed learning due to their life experiences. Trauma, loss, mental illness, and social-emotional developmental delays present a variety of challenging educational issues for such youth. This study was undertaken at a Therapeutic Residential Care (TRC) facility to provide insights into psychosocial and educational experiences adolescent clients were facing.

A total of 85 clients participated in this study. The setting was an adolescent Therapeutic Residential Care (TRC) facility located in the Rocky Mountain area of the United States. Results from Pearson product moment correlations and stepwise multiple regression analyses indicated that the more adolescent clients made gains in reading during their time in treatment, and the more positive their overall psychosocial developmental attitudes, the more confident they felt about their school functioning upon exit.

This study investigated how specific growth in psychosocial development was associated with educational gains and attainment and with confidence in school. The participant agency was a middle school/high school that is integrated into adolescent therapeutic residential care (TRC). This integrative structure allows residential centers to partner with local public education systems to provide specialized, accredited schooling on TRC campuses (ACRC, 2018), with a particular focus on the incorporation of mental health treatment with schooling. Such integration is important for a variety of reasons, most notably because research indicates that school performance is predictive of overall youth resiliency (ACRC, 2018). As asserted in the Association of Children’s Residential Center’s (ACRC) recent position paper (2018), “high quality education fosters the development of self-regulatory, relational, and cognitive skills, and is empowering. School (in therapeutic residential care) offers the possibility of a supportive peer group and positive relationships with adults and authority figures with whom youth...
can experience a sense of acceptance and affiliation. This is true for all young people, not just those entering residential care, but for those, in particular, school can be therapeutic, just as therapy can be instructional” (p.3).

Youth in TRC represent a significantly vulnerable adolescent population, and it is not unusual for these youth to have considerable school difficulties as well as numerous mental health challenges (Brown, Barrett, Ireys, Allen, Pires, & Blau, 2010). In fact, it is estimated that 33% of adolescents in TRC have a disabling condition, typically an emotional disturbance, specific learning disability, developmental delay, and/or other health impairments significantly influencing learning (Quinn, Rutherford, Leone, Osher, & Poirier, 2005). Such youth are also regularly under-identified for individualized help in school systems (Quinn et al., 2005).

Positive relationships with teaching staff have been consistently identified as important to overall mental health treatment outcomes. Huang, Duffee, Steinke and Larkin (2011) indicate that early engagement with staff in TRC school programs is consistently correlated with improved mental health outcomes for adolescents. Additionally, peer relationships are shown to be important to academic success and can serve as either a powerful protective factor or a risk factor depending on the quality of the relationship (ACRC, 2018; Coll, Powell, Thobro, & Haas, 2010; Coll, Sass, Freeman, Thobro, & Hauser, 2013). Perry and Ablon (2019) note that a positive relationship with an adult, often a teacher, is the single biggest predictor for productive mental health change. Thus, those teaching in TRC schools are advised to focus on interpersonal interactions as well as academic success by involving youth in collaborative learning via productive individual and group dynamics (ACRC, 2018).

One major challenge, however, is that the majority of those in TRC have fallen woefully behind academically (Leone & Cutting, 2004). Prior to entering TRC, such youth have typically experienced significant academic neglect, often due to local school district underfunding (Leone & Cutting, 2004). Harder, Huyghen, Knot-Dickscheit, Kalverboer, Köngeter, Zeller, and Knorth (2014) remark that educational performance is often entwined with socio-emotional factors prior to entering residential care, meaning those from lower socio-economic backgrounds may be further behind academically. In addition, it is relatively common for up to half of the youth entering residential systems to not have an IEP (Individualized Educational Plan) even when virtually all do in fact experience some sort of learning disability (ACRC, 2018).

Focusing on assessing academic needs and strengths within an overarching framework of psychosocial development is considered an effective way to help youth and staff in TRC identify previously missed educational needs and/or deficits (ACRC, 2018; Coll, Stewart, Juhnke, Thobro, & Haas, 2009). Additionally, developing resiliency/protective factors through building good social relationships, self-confidence, coping skills, and a functional support system has proven to be beneficial to school performance and behavioral
treatment outcomes (Mowder, Cummings, & McKinney, 2010). And so, because of the important interrelationships between academic and psycho-social needs, assessment of both is important (ACRC, 2018). Yet exploring relationships between specific academic and psychosocial variables has been sorely lacking in the professional literature even with urgent calls to do so (ACRC, 2018).

Sound assessment processes as youth transition from residential to community aftercare is also considered vital. Effective aftercare for youth leaving therapeutic residential care generally includes academic, family, and social supports designed to assist youth in maintaining their goals, transitioning back into their daily lives, and preventing the need for additional intensive treatment (Trout, Hoffman, Epstein, & Thompson, 2014; Tyler, Trout, Epstein, & Thompson, 2014). Unfortunately, all too often academic and social gains made by adolescents in residential treatment programs are not sustained (Trout et al., 2014). Moreover, assessment of academic strengths upon leaving residential care is either not undertaken at all or the results are not systematically monitored during aftercare.

Tyler et al. (2014) discovered that youth confidence about transitioning back to school and community was the strongest predictor of maintaining the positive gains they made during residential care. Similarly, teachers rated such youth confidence as vitally important (Trout et al., 2014; Tyler et al., 2014). Ablon (2019) also stressed the importance of building confidence in youth as perhaps the key for effective behavioral outcomes. This youth confidence construct has also been neglected in the professional literature (ACRC, 2018).

**Purpose of the Study**

Specifically, there is little known about the relationships between specific psychosocial and educational variables in TRC settings (ACRC, 2018). Knowing how these variables relate to one another can potentially help professionals evaluate and adjust both mental health services and educational programming to enhance overall treatment effectiveness.

What was of chief interest in this study were the relationships between educational gains, growth in psychosocial development, and the perceived strength in school functioning at the end of treatment. Therefore, the following research questions were explored:

RQ1: Are emotional and behavioral strengths and psychosocial development associated with academic gains?

RQ2: Are psychosocial development and academic gains associated with school functioning strengths at exit from treatment?
RQ3: Are school functioning strengths sustained at six months after exit from treatment?

Method

Participants

A total of 85 clients participated. Participants included 37 males and 39 females; nine (9) participants did not provide a gender. Nineteen percent (19%) of participants were Latinx, 26% were American Indian/Native American, 48% were Caucasian, and 7% were multi-ethnic. The average age was 15.2 years (sd = 1.4), with a range of 12 to 18 years.

Settings

The setting for this study was an adolescent Therapeutic Residential Care (TRC) facility located in the Rocky Mountain area of the United States. Courts and state Health and Family Services departments refer adolescents to this facility who have prior criminal histories and/or child protection orders, where they are treated for a combination of mental health, school, and substance abuse issues. Therapeutic treatment plans include schooling, recreation, outdoor programing, and counseling (individual, group, and family). The average resident goes to school for about 7 h each day and receives 1 h of individual counseling, 4 h of group counseling, and half an hour of family counseling per week. This TRC has been accredited by the Joint Commission (TJC) for Behavioral Health since 1999. The on-site school is trauma-informed, meaning that staff have been trained in trauma-related issues for youth, specifically linked to how such trauma impacts learning. The school has a 1 to 6 faculty-student ratio and is intently focused on individualized learning, positive incentives, and team building in ‘home-room’ groups. Homeroom groups are designed and implemented to help students build relationships, engage in positive group activities, find their academic strengths, provide daily motivational lessons, and reinforce math, reading, and writing support throughout the week. The school closely monitors safety, has a book club, a student-run coffee shop, and assists youth with weekly visits to its library.

Instrumentation

The Measure of Psychosocial Development (MPD) (Hawley, 1988) is based on psychoanalytical, biographical, historical and anthropological methods of study in which Erik Erikson proposed a theory that every individual experiences eight developmental stages in the course of the life span. Each stage is
marked by its own unique central crisis or conflict, which is the result of interacting biological, psychological, and cultural forces. For each stage conflict, there are unique positive and negative attitudes, or attributes of personality, which emerge from successful and unsuccessful resolution. It is the resolution of these conflicts or crises that dynamically generates the characteristics of individual personalities.

The MPD was used in this study to assess levels of psychosocial development related to emotional functioning in adolescents. The MPD is a self-report instrument based on Eriksonian constructs of adolescent and adult personality development (Hawley, 1988). The MPD provides an index of psychosocial health based on Erikson’s eight stages. The MPD consists of 112 self-descriptive statements rated on a 5-point Likert scale ["Very much like me" to “Not at all like me”]. The eight stages are each measured in three ways, first with 8 positive scales only (e.g., Trust, Autonomy, et al.) tallying to provide a Total Positive (TP) score; then with 8 negative scales only (e.g., Mistrust, Shame & Doubt, et al.) tallying to provide a Total Negative (TN) score; and finally with their 8 resolution scales (positive scores minus negative scores for each stage) called Resolution (R) scores 1: Trust vs Mistrust, R2: Autonomy vs. Shame & Doubt, R3: Initiative vs. Guilt, R4: Industry vs. Inferiority, R5: Identity vs. Identity Confusion, R6: Intimacy vs. Isolation, R7: Generativity vs. Stagnation, R8: Ego Integrity vs. Despair. A low resolution suggests developmental stress resulting from lack of adequate resolution of that specific stage. The eight different resolution sub-scores and then all are added up to a total score, called the Total Resolution (TR) score.

Normative data for the MPD are based on a sample of 2,480 individuals, ages 13 to 86, collected over a period of 7 years. Both reliability and validity for the MPD are robust (Hawley, 1988).

The MPD was designed, normed and validated from Erikson’s assertion that youth (and adults) possess or do not possess adequate seeds for future developmental stages (Hawley, 1988). In each stage, the psychosocial challenges of the previous stages are faced again. For example, a youth will have the adequate seeds (or not) of generativity even though this stage does not occur in full until mid-life. Teachers and clinicians should be working with youth not only on the deficits of past stages, e.g. trust vs. mistrust, but the seeds for future stages (Hawley, 1988). See Table 1.

The Woodcock–Johnson Tests of Cognitive Abilities (WJ) is a set of intelligence tests first developed in 1977 by Richard Woodcock and Mary E. Bonner Johnson. It was most recently revised in 2014. Internal consistency reliabilities are high for individual tests (.80’s and .90’s) as well as clusters (.90’s). Together, these batteries form a comprehensive system for measuring general intellectual ability, specific cognitive abilities, oral language abilities, and academic achievement across a wide range. Normative data are based on a large, nationally representative sample of 7,416 individuals ranging from 2 to 90-plus years. This study specifically explored gains in reading, math and writing. See Table 1.
The Behavioral and Emotional Rating Scales–Second edition (BERS2) is a psychometrically sound, norm-referenced, standardized instrument designed to aid in the process of strength-based assessment. The BERS2, which consists of 52 Likert-type items, provides an over-all strength index and five-factor-analytically derived subscales that assess important areas of functioning. The BERS2 is scored on a 4-point scale ["Very much like me" (3) to “Not at all like me” (0)]. The subscales include (a) Interpersonal Strength (with queries like ‘reacts to disappointment in a calm manner’), which measures ability to control emotions and behaviors in social situations; (b) Family Involvement (e.g., ‘participates in family activities’), measuring participation and relations with family; (c) Intrapersonal Strength (e.g., ‘demonstrates a sense of humor’), assessing the child’s perception of competence and accomplishment; (d) School Functioning (e.g., ‘pays attention in class’), addressing confidence and competence in classroom tasks; and (e) Affective Strength (e.g., ‘acknowledges painful feelings’), focusing on the ability to give and receive affect (Epstein, Mooney, Ryser, & Pierce, 2004). Higher scores reflect greater perceived strengths.

Scores from the BERS2 are internally consistent and converge with other behavioral and emotional measures which, taken together, suggest that the BERS2 is appropriate for assessing the emotional and behavioral strengths of youth in intensive mental health treatment settings, including therapeutic residential care (Epstein et al., 2004). With respect to test–retest reliability, all correlations were above .80 (Epstein et al., 2004).

The primary measure of academic gains utilized at this TRC is the Woodcock–Johnson (WJ) achievement test. The primary measure of youth development is the Measure of Psychosocial Development (MPD), and the measure for school functioning strengths is the Behavioral and Emotional Rating Scale–Second Edition (BERS2).
**Procedure**

The MPD and Woodcock–Johnson instruments were administered to the participants within 3 weeks of admission. Within 3 weeks of planned TRC discharge, the BERS2 was administered and the Woodcock–Johnson was administered for a second time. The average length of stay in therapeutic residential care was 6.1 months. The participants completed the instruments in private monitored by staff members who were available to answer questions. Youth participants assented to participate, and university IRB approval was obtained prior to the study (with exempt status as the data were part of assessment information gathered over the course of treatment at the agency, with prior appropriate consents given).

**Results**

For Research Question 1, to explore the specific correlations between emotional and behavioral strengths and psychosocial development with academic gains, Pearson correlations were conducted. Tables 2 and 3 present these results.

Woodcock–Johnson reading, mathematics, and total gain scores significantly correlated with the BERS school subscale score at moderate to strong levels. Reading gain was the highest correlate, indicating a strong significant relationship (.5). All but two MPD subscales significantly correlated with the BERS school subscale; with R7: Generativity vs Stagnation being the strongest (.39). The two that did not significantly correlate were R6: Intimacy vs. Isolation (.20) and Total Negative (TN) (–.21). All the statistically significant correlations were at least at moderate levels.

<table>
<thead>
<tr>
<th>Table 2. BERS school functioning subscale correlated with Woodcock–Johnson gain scores.</th>
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<tr>
<td><strong>Woodcock Johnson Gain Score</strong></td>
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<tr>
<td>Reading</td>
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<tr>
<td>BERS School</td>
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<td>Functioning n</td>
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<tr>
<td>* p &lt; .05; ** p &lt; .01; ***p &lt; .001</td>
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</table>
| Woodcock–Johnson administered within 3 weeks of admission; BERS administered within 3 weeks of discharge.

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<tr>
<th>Table 3. BERS school subscale correlated with MPD subscales (n = 85).</th>
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<tr>
<td><strong>MPD Subscale</strong></td>
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<td>BERS</td>
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*See Table 1 for explanation of MPD subscale abbreviations

* p < .05; ** p < .01; ***p < .001
For Research Question 2, given that significant correlates were found, the next step in the analyses was to compute a stepwise multiple regression with the BERS2 school subscale score as the dependent variable and selected Woodcock–Johnson gain scores and selected MPD subscale scores as independent variables. Not all WJ gain scores and MPD subscales were included in the regression because of significant multicollinearity in some scores, and high multicollinearity can reduce the reliability of the predictive model. Woodcock–Johnson reading gain and MPD total positive became the two independent variables because of their strong correlations to the dependent variable and their low multicollinearity with other variables. A stepwise regression was employed to measure the unique contribution of each independent variable to the model.

MPD total positive explained 28.2% \( (r = .53) \) of the variance in the BERS2 school subscale and WJ reading gain explained an additional 8.9% \( (r = .61) \), although reading gain was only trending toward significance as a predictor at \( p = .06 \) within the model. The overall model, however, with both variables included was significant (\( F = 7.96; \text{df} = 2/27; p = .002 \)). The resulting regression equation with standardized coefficients was: BERS School subscale score = \(.43 \times \) MPD Total Positive + \(.31 \times \) WJ Reading gain. This translates in practical terms as the following: when Total Positive \( (M = 143.7; \text{SD} = 31.2) \) increases by 31.2 points and Reading Gain \( (M = 1.1; \text{SD} = 2.0) \) increases by 2.0 grade levels, the BERS School Strengths score \( (M = 19.9; \text{SD} = 4.6) \) increases by 3.4 points, which represents an effect size of .37.

The additional query (research question 3) was an investigation of whether School Functioning strengths remained stable 6 months after ending therapeutic residential care. Thirty-two follow-up BERS2 were completed 6 months after discharge with post-exit school performance data also collected to track school success. BERS2 School Functioning subscale scores remained stable 6 months after ending therapeutic residential care, supported by a nonsignificant pairwise t-test analysis (\( p = .258; t = 1.15, \text{df} = 31 \)). Higher BERS2 School Functioning scores were associated with youth regularly attending school and performing adequately in school 6 months later.

**Discussion and Implications**

Reading gains and growth in psychosocial development were significantly associated with school functioning strengths at discharge in this study. Interpreting this relationship from a practical standpoint means that a) the more youth made gains in reading during their time in treatment, and b) the more positive their overall psychosocial developmental attitudes, then the more confident they felt about their school functioning upon exit. As previously indicated, building confidence has been found to be a key ingredient in effective longer-term outcomes with this population (Ablon, 2019).
These are encouraging findings since they provide both mental health and education staff clear metrics (reading gains, positive psychosocial development, and school strengths) to use when engaging in continuous quality improvement and in evaluating mental health and education treatment outcomes. Having clients leave with as high BERS2 School Functioning scores as possible is important since the relationship between BERS2 scores and actual performance in school after residential treatment has been preliminarily validated with this population. In fact, the follow-up results show that BERS2 scores are stable over a six-month window; e.g., high scores remained high.

Reading gains, to a greater degree than math or writing gains, was predictive for school strengths and confidence. This finding is not surprising given the long history of literacy research exploring such relationships. It is well known that the perception of their reading ability shapes students’ outlook on school, influences their perceptions of their abilities, and impacts their behavior within school (Boyes, Tebbutt, Preece, & Badcock, 2018; Durik, Vida, & Eccles, 2006; Frijters et al., 2018; Susperreguy, Davis, Duckworth, Chen, & Davis-Kean, 2018). So, when clients in this particular TRC made gains in reading, it stands to reason based on prior research that this would be positively associated with a measure of overall school functioning. Clinicians and educators in TRC settings can explore this relationship, positing that as one increases (reading gains), so does the other (school strengths and confidence). And having them increase before program exit is a positive goal to achieve.

Still, these results need careful contextualization and further research. Correlation is not causation and directionality of the relationships revealed in this study cannot be wholly established. It might be that clients who made gains in reading arrived at the TRC already strong in school functioning as measured by the BERS, since the BERS was only administered at the conclusion of treatment at the TRC. Both BERS2 and MPD were not administered in a pretest/posttest design during residential treatment. The BERS2 was administered for the first time at the end of residential treatment and the MPD was administered only once at the beginning of treatment. Thus, it is not known if this particular TRC was able to increase BERS2 and MPD scores during treatment. Future research needs to include this pretesting and posttesting so that a more complete modeling can be undertaken of the relationships between all of these variables. Of particular value may be the exploration of interaction effects over time.

**Practical Applications**

This study contributes to the emerging evidence that if schools in therapeutic residential settings provide a high-quality education that includes a focus on positive psychosocial development as well as assessment and identification of
academic strengths and struggles, youth confidence in school will be the result and will carry forward after such intensive mental health treatment is completed. This study can be seen as both validating current practices at this TRC integrated school and providing opportunities for continuous quality improvement.

Current practices at this TRC for promoting reading gains include group book reads, book clubs, a homeroom focus on reading and writing, regular library visits, and engaging book and periodical collections that include comic books, graphic novels, and youth-oriented magazines. Additionally, teachers are taking into consideration student reading ability levels and suggest and assign reading materials at appropriate levels for individual students so that the materials can be successfully read. In light of these results, it can be said that productive and enjoyable reading experiences are critical to reading growth, since they simultaneously build both reading ability and confidence. Of note, results indicated that school staff also promote Total Positive (TP) psychosocial development and resiliency, feasibly by consistently practicing and modeling relational and positive group dynamics during the school day.

Budding practices for continuous quality improvement related to reading gains planned at the TRC involve expanding comic book class opportunities now taught as an elective, encouraging all students to engage in group book reads, putting a small library in each living quarter (called cottages), encouraging teachers to frequently visit the cottages to more casually connect and to informally check on youth’s homework and promote reading, and formally schedule school staff into the cottages to read aloud to youth with an agreed-upon book each week. Discussion with school staff (personal communication, 5/31/19) revealed the following specific priorities to be implemented immediately; a pledge to focus on reading (in general) as a curricular imperative, a promise to more systematically standardize the home-room period at the beginning of the day for all youth to focus on relationship building and increasing readiness to learning that day, and a pledge to increase lunchtime visits to at least one teacher at each cottage (youth’s living quarters) to two times per week – with the goal to deepen relationships and problem solving of any particular academic challenges in an informal setting.

For mental health counselors, as previously noted, school can be therapeutic, just as therapy can be instructional. The counselors/clinicians (personal communication, 5/30-31/19) committed to intentionally focusing on asset and resiliency building across Total Positive (TP) scales, especially centering on the school-related scales of initiative and industry directly tied to school assignments; and with boosting generativity, conceivably through partnering with the school to have older more capable students tutor younger ones under supervision.
Moving Forward and Limitations

Because of the significant relationships discovered between key variables, current practices at the TRC have been validated and guidance has emerged for moving forward. Specifically, continued work to increase the number and size of reading gains by employing the practices outlined above will be important. And as previously mentioned, employing an entry (pretest) and exit (posttest) model for the MPD and BERS2 is equally vital so that current program outcomes are more thoroughly measured and explored. Knowing how effective current and planned programming is at influencing MPD and BERS2 scores is also crucial to deepening the understanding of the relationships between key psychosocial and educational variables. A more extensive and longitudinal study of how students perform in school and life upon exit is also needed so that the understanding of the relationships found in this study is further deepened and extended well beyond the date of exit from TRC. Additional research exploring the relationship between exit BERS2 school functioning scores and school performance post-TRC is also needed to establish with greater reliability the predictive capacity of this relationship, as the participant number was small in this study.

Other limitations include a single agency sample and the need to investigate other possible causal pathways. More extensive covariate analyses are needed to control for and explore variables that could mediate the relationships reported herein. Such variables as ethnicity, gender, age, socio-economic status, prior school performance, family functioning, and causes for referral to therapeutic residential care might also be considered. Conducting more extensive and sophisticated analyses will only deepen our understanding of how to best support this most vulnerable population of youth as they traverse school and mental health treatment and move into post-residential life.

References


