

relations theories: A study of the transition to motherhood. *British Journal of Medical Psychology* 74: 85–100.

RUBIN, R. (1975). Maternal tasks in pregnancy. *Maternal Child Nursing Journal* 4:143–153.

ZUROFF, D.C., & FITZPATRICK, D.K. (1995). Depressive personality styles: Implications for adult attachment. *Personality & Individual Differences* 18:253–265.

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**CHANGES IN ADOLESCENT ATTACHMENT RELATIONSHIPS
 AS A RESPONSE TO WILDERNESS TREATMENT**

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This study examined shifts in adolescents' perceptions of attachment relationships with parents over the course of a seven-week residential program. It addressed the research question, Do adolescents in residential wilderness treatment experience changes in attachment relationships as a response to treatment?

John Bowlby (1969, 1973, 1980) argued, using ethnological, clinical, and empirical data, that humans develop connections to each other that are central to survival. These "attachment relationships" form early in life and serve as the basis for future relationships. Bowlby believed that these early relationships function as internal relational blueprints, and that the internal working model is relatively stable over the lifespan.

Research reveals that a person's attachment classification can shift as a result of negative or positive life experiences (Hamilton 2000; Lewis, Feiring, and Rosenthal 2000). Research also suggests that attachment classifications can shift following lengthy treatment experiences (Diamond et al. 1999; Fonagy et al. 1995; Korfmacher et al. 1997). While research has examined the effect of treatment on attachment classification in adulthood, only one study has considered this process in adolescence. That study, by Muscetta, Dazzi, and DeCoro (1999), addressed the impact of treatment on attachment through investigating a single adolescent in individual therapy. The present study expands

on that contribution through considering the impact of a specific type of residential treatment on the attachment relationships of a group of adolescents.

It seems unlikely that a seven-week wilderness treatment can shift an adolescent's long-held internal working model. Thus, we examined shifts in adolescents' attachment relationship perceptions following residential wilderness treatment. We verified that if such treatment could change those perceptions, then this kind of shift might be a building block for more long-lasting relational changes.

What are the characteristics of adolescents in wilderness and residential treatment? One group of researchers defined the adolescent residential treatment population as patients who are at current or recent risk of suicide, danger to others, elopement, criminal delinquency, or sexual aggression (Lyons et al. 1998). Thirty to 40 percent of adolescents admitted to residential treatment self-injure (Swales and Kiehn 1995), and at least half have a history of aggressive behavior (Lyons and Schaefer 2000). Many adolescents entering residential treatment are also victims of emotional, sexual, or physical abuse (Swales and Kiehn 1995).

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We used a one-group pre/post design to estimate the effects of brief residential treatment on a group of adolescents, with particular attention to their attachment relationships. The study sample consisted of voluntary participants, drawn from adolescents entering a seven-week wilderness therapy program during a given five-month period. The 93 adolescents in our sample, all placed in the program by their parents, ranged from fourteen to seventeen years of age, with a mean of 15.96 ($SD >.943$). They consisted of 56 males (60.2%) and 37 females (39.8%). Ethnic composition was 84 white (90.3%), 3 Hispanic/Latino (3.2%), 2 Native American (2.2%), 1 Asian (1.1%), and 3 biracial (3.2%).

Study participants completed the Adolescent Attachment Questionnaire (West et al. 1998) and the Inventory of Parent and Peer Attachment (Armsden and Greenberg 1987) on the first and last day of treatment. Both measures address perceptions of mothers and fathers. Based on attachment theory, we predicted that these adolescents would develop healthier attachments to mother and father figures, indexed by a decrease in attachment scores at the end of treatment.

T test analyses show that adolescents in our study initially perceived their attachment relationships as significantly more problematic and disturbed than did a comparable group of adolescents. Compared to the sample of 133 adolescents in psychiatric residential treatment

studied by West et al. (1998), adolescents in the current study perceived their parents at intake to be significantly less available (as measured by a lower Available subscale score) and reported significantly less empathy for the needs and feelings of their parents (as measured by a lower Goal-Corrected partnership subscale score).

Our findings may reflect the fact that most adolescents in wilderness treatment have earlier received various mental health treatments and home placements that have been unsuccessful. For example, in a study of adolescents in wilderness treatment, Russell (2003) reported that of his sample of 858, 17% had received prior inpatient and 57% prior outpatient treatment. This ineffective interpersonal treatment may have exacerbated their perception of problematic attachment relationships.

The psychopathology of the adolescents in our sample may also have influenced our findings: 81.7% were given a mood disorder diagnosis at intake; 90.3% received a disruptive behavior disorder diagnosis; and 80.6% received a substance abuse or dependence diagnosis. Serious psychopathology, including suicidality and substance abuse, has been strongly correlated to insecure attachment in adolescence (Allen, Hauser, and Borman-Spurrell 1996; Cooper, Shaver, and Collins 1998; McGee et al. 2000; Nakash-Eisikovits, Dutra, and Westen 2002; Rosenstein and Horowitz 1996; Wallis and Steele 2001; Weber, Meloy, and Gacono 1992; West et al. 1999).

Turning to shifts in perceptions of adolescents' attachment relationships with parents in response to treatment, we obtained mixed results using paired sample *t* test analyses. Adolescents reported significantly less anger toward parents by the end of treatment, but also less confidence in the availability and responsiveness of parents and less empathy for parents' needs and feelings.

Specifically, we observed significant changes from pre- to post-scores on the Inventory of Parent and Peer Attachment (Armsden and Greenberg 1987). Changes in Mother Total and Father Total scores indicate that at the end of treatment adolescents in the sample perceived their attachment relationships with parents to be more problematic and disturbed. Although scores on Mother and Father subscales showed a decrease in anger toward mother and father, both parents were perceived to be less sensitive and responsive to their children's emotional states, and less available to assist with concerns. Study participants reported less confidence that their parents understand and respect their needs and desires.

While our findings may indicate that the residential care negatively influenced attachment relationships, more likely is the possibility that after completing the program adolescents were more sensitive to the problematic elements of these relationships. As the program's individual and family treatment interventions sought to heighten relationship awareness in both adolescents and parents, our sample may have become increasingly aware of dysfunctional elements within their relationships. Our findings suggest that future treatment should focus on strengthening the adolescent-parent attachment relationship (Diamond, Siqueland, and Diamond 2003).

Our findings emphasize the importance of studying that relationship in the context of residential care. Even in an age of managed care (Foster 2002), the data seem to indicate a trend toward increasing residential placement for adolescents (Wells 1991). "The best estimates are that at least 50,000 adolescents are placed in residential treatment each year in the United States and perhaps a larger number in inpatient treatment" (Goodrich 1994, p. 277). Research regarding adolescents in residential treatment has lagged (Curry 1991), even while the number of clients has increased (Edwards 1994).

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Further, since 1994 there has been a paucity of data regarding both numbers in treatment and the efficacy of that treatment. As Courtney (2000) states, "In many ways the child welfare systems, including out-of-home care, is one huge experiment that has been conducted on children and families over a period of many decades at a cost of untold billions of dollars. . . . Unfortunately, after decades of this grand experiment, the child welfare field has little conclusive to say about the comparative benefits of any of its interventions . . ." (p. 745). Courtney thus sees "a desperate need for rigorous program evaluation . . ." (p. 745). The study we report here is one attempt to carry out a more rigorous and empirical program evaluation.

We aimed to develop a better understanding of the attachment relationships of adolescents in wilderness treatment. With tens of thousands of adolescents in residential care and attachment in adolescence poorly understood (Allen and Land 1999), research such as this, which seeks to understand changes in adolescents' attachment relationships during out-of-home care, is crucial to planning appropriate treatments for this population in the future.

REFERENCES

- ALLEN, J.P., HAUSER, S.T., & BORMAN-SPURRELL, E. (1996). Attachment theory as a framework for understanding sequelae of severe adolescent psychopathology: A 11-year follow-up study. *Journal of Consulting & Clinical Psychology* 64:254–263.
- & LAND, D. (1999). Attachment in adolescence. In *Handbook of Attachment: Theory, Research, and Clinical Applications*, ed. J. Cassidy & P.R. Shaver. New York: Guilford Press, pp. 319–335.
- ARMSDEN, G.G., & GREENBERG, M.T. (1987). The Inventory of Parent and Peer Attachment: Individual differences and their relationship to psychological well-being in adolescence. *Journal of Youth & Adolescence* 16:427–454.
- BOWLBY, J. (1969). *Attachment and Loss: Vol. 1. Attachment*. New York: Basic Books, 1982.
- (1973). *Attachment and Loss: Vol. 2. Separation*. New York: Basic Books.
- (1980). *Attachment and Loss: Vol. 3. Loss*. New York: Basic Books.
- COOPER, M.L., & SHAVER, P.R. (1998). Attachment styles, emotion regulation, and adjustment in adolescence. *Journal of Youth & Adolescence* 74:1380–1397.
- COURTNEY, M.E. (2000). Research needed to improve the prospects for children in out-of-home placement. *Children & Youth Services Review* 22:743–761.
- CURRY, J.F. (1991). Outcome research on residential treatment: Implications and suggested directions. *American Journal of Orthopsychiatry* 61:348–357.
- DIAMOND, D., CLARKIN, J., LEVINE, H., LEVY, K., FOELSCH, P., & YEOMANS, F. (1999). Borderline conditions and attachment: A preliminary report. *Psychoanalytic Inquiry* 19:831–884.
- DIAMOND, G., SIQUELAND, L., & DIAMOND, G.M. (2003). Attachment-based family therapy for depressed adolescents: Programmatic treatment development. *Clinical Child & Family Psychology Review* 6:107–127.
- EDWARDS, J.K. (1994). Children in residential treatment: How many, what kind? Do we really know? In *Applied Research in Residential Treatment*, ed. G. Northrup. New York: Haworth Press, pp. 85–99.
- FONAGY, P., STEELE, M., STEELE, H., LEIGH, T., KENNEDY, R., MATTOON, G., & TARGET, M. (1995). Attachment, the reflective self, and borderline states: The predictive specificity of the Adult Attachment Interview and pathological emotional development. In *Attachment Theory: Social, Developmental, and Clinical Perspectives*, ed. S. Goldberg, R. Muir, & J. Kerr. Hillsdale, NJ: Analytic Press, pp. 233–278.

- FOSTER, E.M. (2002). Modeling child and adolescent psychiatric hospital utilization: A framework for examining predictors of service use. *Children's Services: Social Policy, Research & Practice* 5:151-173.
- GOODRICH, W. (1994). Research issues in adolescent inpatient psychiatry. In *Handbook of Adolescent Inpatient Psychiatric Treatment*, ed. H.S. Ghuman & R.M. Sarles. New York: Brunner/Mazel, pp. 277-292.
- HAMILTON, C.E. (2000). Continuity and discontinuity of attachment from infancy through adolescence. *Child Development* 71:690-694.
- KORFMACHER, J., ADAM, E., OGAWA, J., & EGELAND, B. (1997). Adult attachment: Implications for the therapeutic process in a home intervention. *Applied Developmental Science* 1:43-52.
- LEWIS, M., FEIRING, C., & ROSENTHAL, S. (2000). Attachment over time. *Child Development* 71:707-720.
- LYONS, J.S., LIBMAN-MINTZER, L.N., KISIEL, C.L., & SHALLCROSS, H. (1998). Understanding the mental health needs of children and adolescents in residential treatment. *Professional Psychology: Research & Practice* 29:582-587.
- & SCHAEFER, K. (2000). Mental health and dangerousness: Characteristics and outcomes of children and adolescents in residential placements. *Journal of Child & Family Studies* 9:67-73.
- MCGEE, R., WILLIAMS, S., POULTON, R., & MOFFIT, T. (2000). A longitudinal study of cannabis use and mental health from adolescence to early adulthood. *Addiction* 95:491-503.
- MUSCETTA, S., DAZZI, N., & DE CORO, A. (1999). "States of mind with respect to attachment" and change in a psychotherapeutic relationship: A study of the coherence of transcript in a short-term psychotherapy with an adolescent. *Psychoanalytic Inquiry* 19:885-921.
- NAKASH-EISIKOVITS, O., DUTRA, L., & WESTEN, D. (2002). Relationship between attachment patterns and personality pathology in adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry* 41:1111-1123.
- ROSENSTEIN, D.S., & HOROWITZ, H.A. (1996). Adolescent attachment and psychopathology. *Journal of Counseling & Clinical Psychology* 64:244-253.
- RUSSELL, K.C. (2003). An assessment of outcomes in outdoor behavioral healthcare treatment. *Child & Youth Care Forum* 32:355-381.
- SWALES, M.A., & KIEHN, B. (1995). Evaluating adolescent units: Some considerations for research and clinical practice. *Journal of Mental Health* 4:227-242.
- WALLIS, P., & STEELE, H. (2001). Attachment representations in adolescence: Further evidence from psychiatric residential settings. *Attachment & Human Development* 3:259-268.
- WEBER, C.A., MELOY, J.R., & GACONO, C.B. (1992). A Rorschach study of

- attachment and anxiety in inpatient conduct-disordered and dysthymic adolescents. *Journal of Personality Assessment* 58:16–26.
- WELLS, K. (1991). Placement of emotionally disturbed children in residential treatment: A review of placement criteria. *American Journal of Orthopsychiatry* 61:339–347.
- WEST, M., ROSE, S., SPRENG, S., SHELDON-KELLER, A., & ADAM, K. (1998). Adolescent attachment questionnaire: A brief assessment of attachment in adolescence. *Journal of Youth & Adolescence* 27:661–673.
- SPRENG, S., ROSE, S., & ADAM, K. (1999). Relationship between attachment–felt security and history of suicidal behaviors in clinical adolescents. *Canadian Journal of Psychiatry* 44:578–582.

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**IT'S HARD TO SAY: THE CHALLENGE OF CONNECTING
 EMOTIONS AND LANGUAGE FOR FIRST-TIME MOTHERS**

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This research is driven by the question, How do people connect emotions and language? More specifically, How do people communicate their subjective experience of emotions verbally and nonverbally in a manner that creates personal relevance for the speaker, and allows others to vicariously experience such emotion?

Bucci (1997) postulates that people use three different systems to represent and process information, including emotional information. These three systems, the subsymbolic, the nonverbal symbolic, and the verbal, constitute her Multiple Code structure. The concept of the Referential Process is at the heart of this theory, as it provides a model of how people connect subsymbolic experience to verbal symbols. The Referential Process can be measured by the Discourse Attributes Analysis Program (DAAP) text analysis system (Maskit and Bucci 2005), which provides output for multiple dictionaries.

Bucci's work addresses the challenging question of how talk therapy works, but it has wider implications as well. A more general question it addresses is how one person comes to have an impact on